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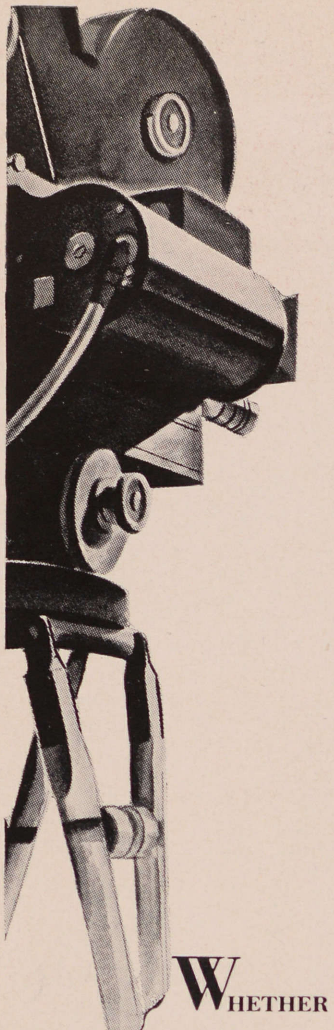
AMERICAN Cinematographer

★ THE MOTION PICTURE CAMERA MAGAZINE ★

December
1942



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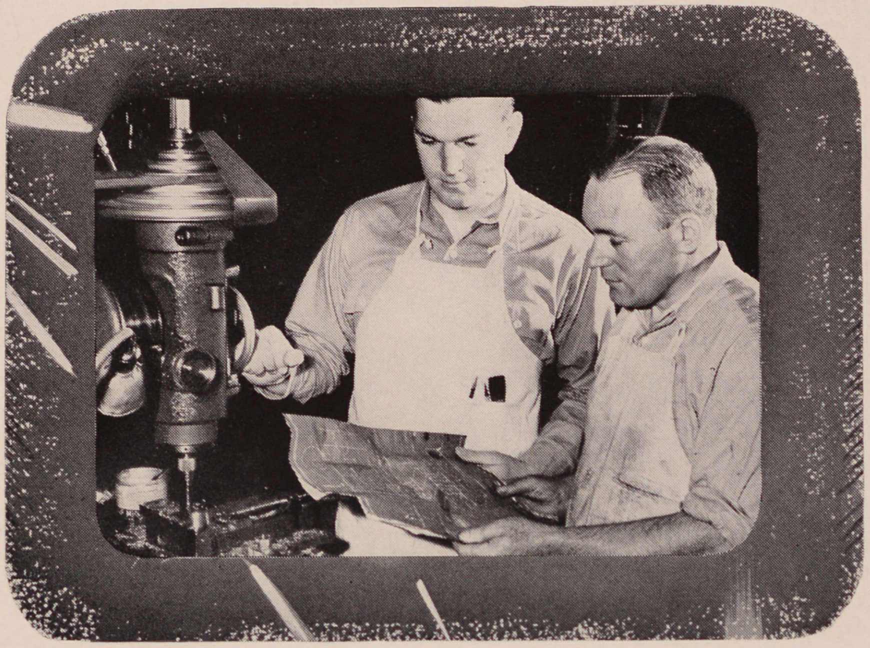

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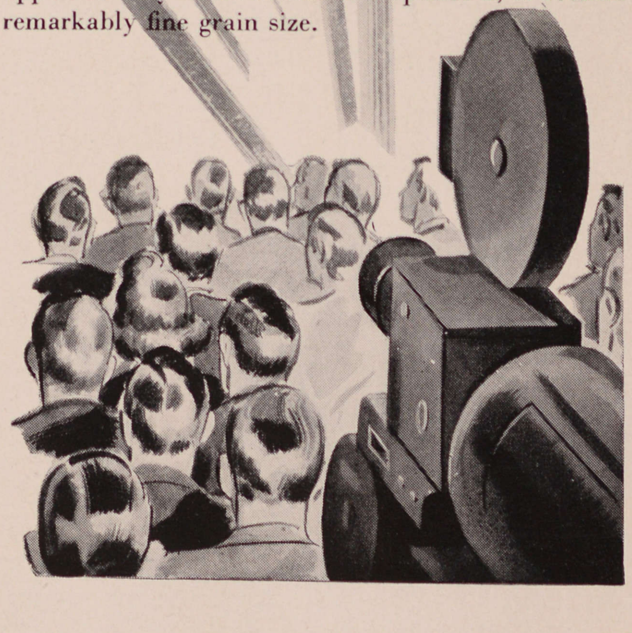

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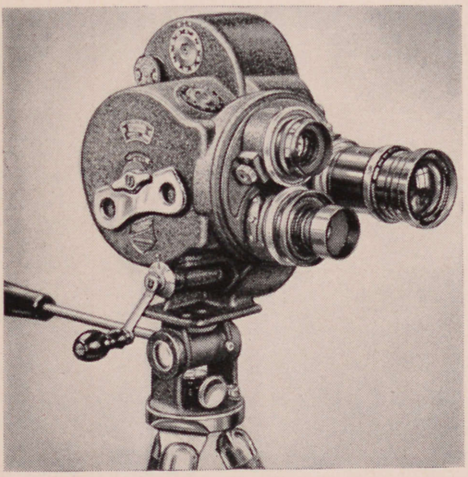

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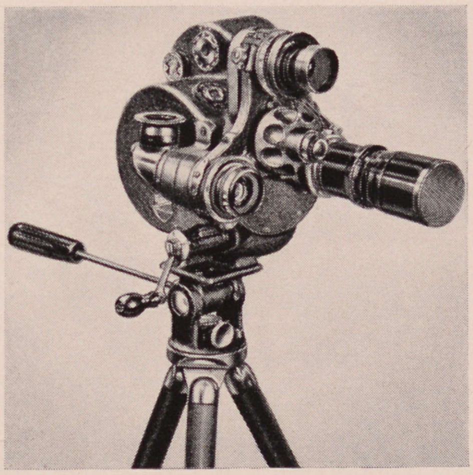

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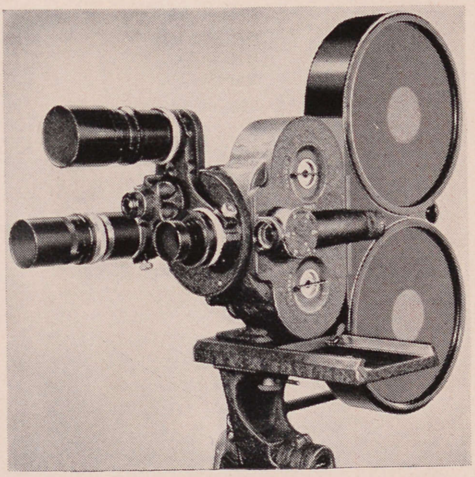

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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE **CAMERA** MAGAZINE

VOL. 23 DECEMBER, 1942 NO. 12

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The Front Cover

This month's cover shows James Wong Howe, A.S.C. (seated at left in sun-helmet) photographing a scene for Warner Bros.' forthcoming special, "Air Force," beneath the dragon-like nose of a Flying Fortress. Note use of wind-cover on microphone overhead.

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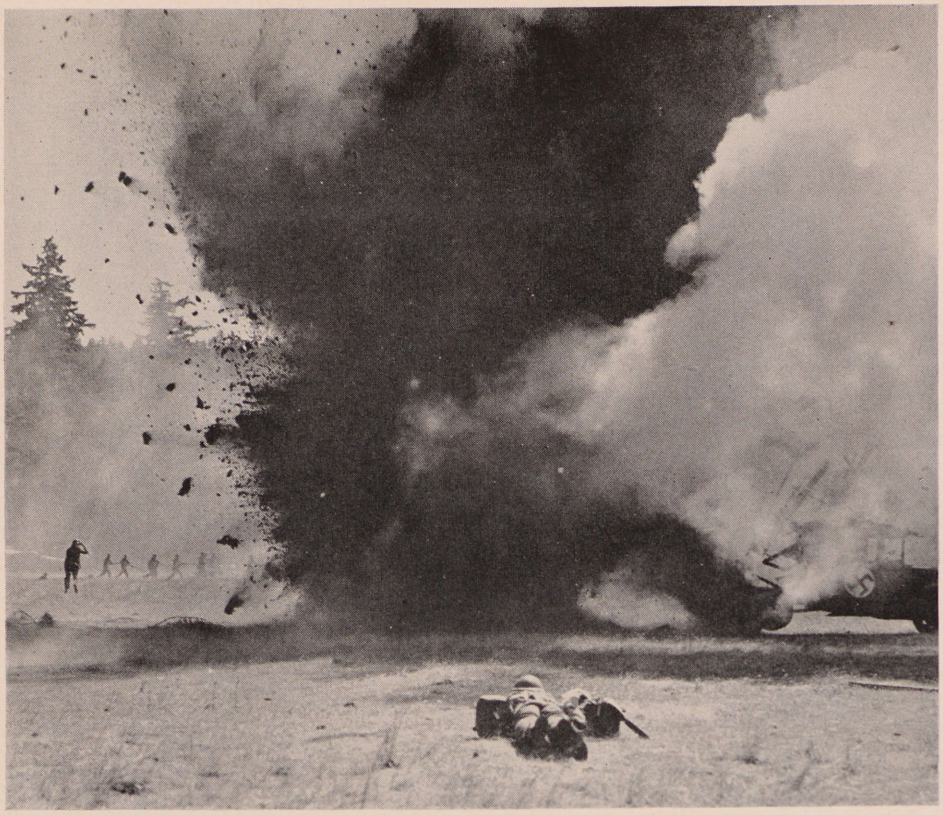


A "soft" explosion from "The Commandos Strike At Dawn." Note use of smoke of contrasting colors for photographic effect. Driver of truck, seen running in left background, is actually in more danger than recumbent soldier nearer blast.

Explosions—Made To Order

By BARNEY WOLF[*]

EXPLOSION-effects are playing an increasing part in pictures lately—not only in theatrical pictures for entertainment, but in training films for the Armed Services made either by Hollywood's studios or by the various Service film units. And an explosion that is satisfactory for picture purposes has to be different in many ways from an explosion intended only to do the work of industrial or military destruction.

First of all, a motion picture explosion must be *safe*. No picture—however important for entertainment or training—is worth endangering human life.

Second—and almost equally important—a movie explosion must be photogenic. It must be effective and "big looking" pictorially, and furnish a definite photographic contrast with its background. As a matter of fact, most of the explosions in actual battle scenes are rather disappointing photographically, in spite of all the actual destruction they create. A properly handled movie explosion, even though it packs but a small fraction of the destructive wallop of even a small shell or bomb, will create a better looking explosion than most real shellbursts.

When working on a studio back-lot within the city, there's often a very contradictory third requirement, for under such conditions the studio explosion must look vicious—and yet be nearly noiseless!

During the past twenty or twenty-five years Hollywood's explosives experts or "powder men," among whom I am proud to be included, have developed highly specialized methods of making these cinematic explosions. I hope this necessarily brief discussion of some of these principles will be of interest to the general reader, and maybe offer some practical help to Army and Navy cinematographers making training films for their services.

The first step in making an explosion for picture purposes is to determine what kind of an explosion we want. For example, what sort of a background do we have? If it's largely light, like sky and open ocean, (as in "Wake Island") the smoke of the explosion should be dark, so it will stand out prominently against its background. Obviously, in a black-and-white picture, a light-toned explosion would be pretty well lost against a light-toned sky background. On the other hand, if the background is dark, as was the case in many scenes in "The Commandos Strike At Dawn," which were played against a background of dark-toned trees, an explosion of white smoke will photograph better. Sometimes, as in the illustration on Page 510, we may find it effective to set off a light-smoke explosion in front of a black one, so that the two stand out in contrast against each other as well as against the background.

To produce this colored smoke, we add to the basic charge of a few sticks of dynamite and gunpowder some chemicals to produce smoke of the desired color. For black smoke, we sometimes use a mixture of carbon tetrachloride and benzol, and sometimes a patented product called "Patch's Black Smoke."

To get white smoke, we can use either sound flash powder, or "Patch's White Smoke." As a matter of fact, it is possible to get smoke of almost any color if we're making a picture in Technicolor. And for flaming sparks and embers, we simply add some Roman candle balls.

Then we have to determine how we want our explosion to look: whether we want it "hard" or "soft," and whether it is to tower up high, or be lower and mushroom out sideways. A "hard" explosion is like the one in the bottom picture on Page 511—not much smoke, but a fair amount of fine dirt and fragments of wreckage. It probably looks a good deal more like the real thing, but it isn't so effective pictorially as the one at the top of the page. A "soft" explosion makes use of pictorial masses of billowy smoke, and usually looks much more impressive on the screen.

The way an explosion will perform can be measured quite accurately according to the amount of explosive used, and the way it is placed. In most cases we bury the charge about three feet in the ground: and as most of the explosion will naturally take the easiest way out—that is, where the covering earth has been removed and then replaced—if the charge is in a deepish, comparatively narrow hole, with straight sides, it will do most of its exploding upward. If the hole is shallower, wider and with more flaring sides, the explosion will naturally spread out more.

The type of ground is extremely important. Identical charges would perform quite differently in hard, solidly packed ground and in loose, sandy soil. The best location I've ever seen for explosion work was the one used for "Wake Island." Down by the Salton Sea, the ground is a sandy clay which is absolutely perfect for staging blasts.

If you're working in rocky or gravelly soil, full of stones, be sure you clear all the rocks away from the vicinity of your charge, and especially from the earth you fill in over your charge. Those rocks can fly like bullets—and just as dangerously! If you want to produce the effect of rocks and clods being thrown up by the blast, mix in ground cork with your refill earth. You can use cork pieces of any size from about the size of a pea up to a chunk as big as a man's head. Painted black, so they'll show up clearly, they look dangerous, but aren't. Even if a big one hit you, it wouldn't hurt.

---

[*] The author is one of Hollywood's many unpublicized technical specialists. As a "powder man" he is one of the industry's top experts on staging explosions. Among his recent films are "Wake Island," "The Commandos Strike at Dawn," and, currently, "China."—The Editor.

Making my charge, I begin by taking a waxed paper or cellophane bag and putting in half a pound or so of flashpowder for a primer. Into the mouth of the bag I insert an electric detonator and its lead wire. Then I tape the mouth of the bag tightly around the lead-in wire, and the primer is ready.

Around this, I build the rest of the charge—usually from three to five or six sticks of dynamite. This can then be put in a sack—a paper bag will do. If the charge is to be used in moist ground or under water, I dip the whole sack repeatedly into melted paraffin—not too hot—until the whole thing is sealed water-tight. A charge like that can be left under water for months, yet will still be dry and ready to go off when the current reaches the detonator.

As a matter of safety, by the way, I usually duplicate the detonators and their wiring, so that if one fails, or only ignites part of the charge, the other will complete the job. Actually, a single "det" is probably enough, but the duplication makes things more positive, and accordingly safer.

The wires leading from the detonator to your control and the battery that fires the charge should be led out of the scene as directly as possible, but of course concealed from the camera. Sometimes you can bury it all the way; at other times, it may be more practical to carry the wire only part way underground, and let it run above-ground the rest of the way, concealed in the grass or behind some natural concealment. In the picture on Page 510, for example, if you look closely you may be able to see the wire running out of the picture to the left, from where it went around to my switchboard.

In scenes representing bombing or shellfire, we may often have a dozen or more charges planted for a single scene, all connected to a single control-panel or switchboard so that they can be fired in the right timing. It sounds very nice to read press agents' releases describing the powder man as sitting at a switchboard like the console of an organ, running his fingers over keys or buttons. But personally I prefer a simple panel equipped with prosaic-looking single-pole, single-throw switches. That way, you can tell at a glance which charges have been fired at any moment, and which are still live. That's often a mighty important detail when some player or stunt man muffs his directions and—as sometimes happens—throws himself down "dead" right on top of one of your charges, instead of a few feet away, as you've told him to do! If you can tell in a split second that that charge is still live, the player is likely to stay alive, too.

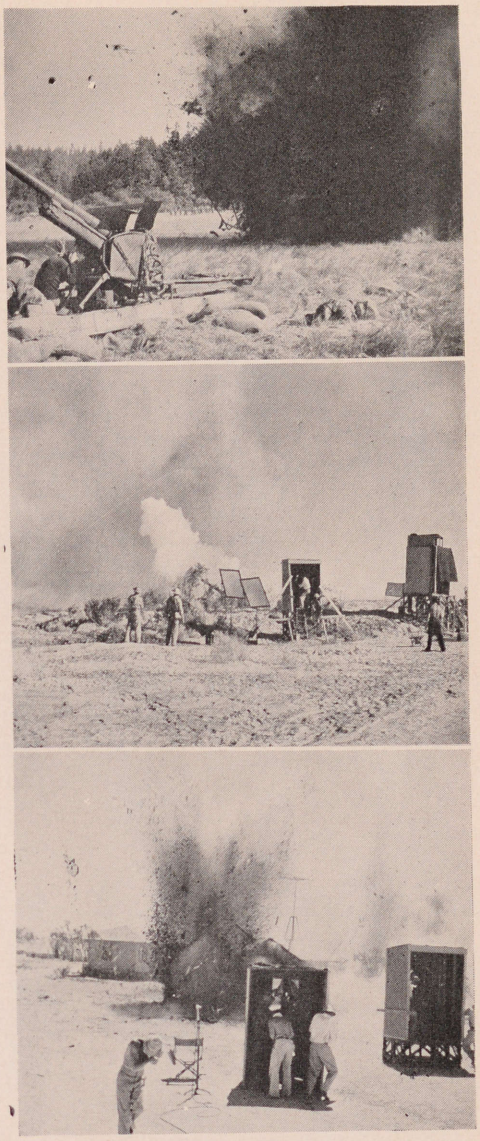
Another important thing to remember in wiring explosions, especially where for a barrage effect or the like you wire several charges more or less in a line, is that often the explosion's effects will travel faster than the electricity that shoots the charges off. I recall one instance where I had wired a number of charges in parallel, to go off at the same time. When I pressed the switch there was an awful anti-climax: only the first charge went off! When I checked the charges, their detonators and the wiring, I found that everything was OK—except that when the first charge went it went so quickly that it sheared off the cable beyond it *before* the current could travel on and fire the next charge!

We often need gunshot effects these days, to show rifle or machine-gun bullets peppering all around some character. To do this we usually use squibs, fired by detonators, and buried in the ground in the desired pattern. In wood, or the like, we bore holes from the back side of the plank almost to the front, and insert our squib or det from the rear. When it fires, it blows out a neat little bullet-shaped hole which looks just as though a bullet had made it, going the opposite direction.

I usually wire these in a sort of series-parallel hook-up. I connect one wire from all the dets to a common line leading to one side of the battery. Then I join the other wires from each two adjacent dets together, and lead this to a metal contact on my switchboard. These contacts for all of the various pairs of dets are arranged on the board in a line. When the time comes to fire, I take a wire from the other terminal of the battery and simply stroke it along the line of contacts, firing the squibs one after the other. By varying the timing of this stroking motion, you can get a very convincing effect of fire from a machine-gun, tommy-gun, or automatic rifle.

In all of this work complete understanding and cooperation between the director, cinematographer, actors and the powder man is vital. If the director and cinematographer are willing to work with the explosives specialist—willing sometimes to move the camera a bit to this side or the other, or up or down, or alter the angle to a slightly longer or closer one, so he can stage a given action in a more favorable spot, it's likely to make the difference between an indifferent shot and a good one, a hard one or an easy one, and—much more important—sometimes between a safe one and a dangerous one.

This cooperation is, if possible, even more important on the part of the actors in the scene, whether they're principals, extras or stunt men, for their own safety depends on it. An experienced explosives man can predict with almost 100% accuracy just what any given explosion will do. If the people who appear in that scene do as he tells them, they are perfectly safe. If they don't, they're likely to get hurt.


Above: two "soft" explosions from "The Commandos Strike At Dawn" and "Wake Island." Bottom, a "hard" explosion.

I recall a book in which some author once quoted the advice given by an old, experienced diplomat to a young assistant. "Above all," he said, "no zeal." That's the sum and substance of the actor's job in an explosion scene. If he does precisely what the powder man tells him, he'll be all right. If he gets over zealous and tries to put an extra thrill in it, or if he's over-cautious and errs on the other side, he's walking in danger either way.

For example, when we were in Canada making "The Commandos Strike At Dawn," we had a scene in which a German motorcycle-rider comes up a road and is ambushed by the Commandos, who bring him down with a well-placed grenade. I told the young Commando who played our Nazi that when he saw the other actor throw the

(Continued on Page 528)

Where Do I Go From Here?

By CAPT. BRYAN LANGLEY*

"JOIN the Army and see the world" is a slogan with which we are all familiar. And certainly Korda's Magic Carpet has nothing on Army Film Unit adventures . . .

I left England in February, 1941, bound for West Africa in company with Osmond Borradaile and my Eyemo. Borradaile had his Newman and between us we had a few thousand feet of film. As it was intended for us to fly from West Africa to the Middle East our baggage was cut down to forty pounds and one camera each. The rest of our baggage, with second camera and vast quantities of film, was to follow us by sea round the Cape. I found it impossible to cater for both Arctic Atlantic conditions and Equatorial African temperatures in forty pounds, of which at least ten was the weight of my suitcase.

Our voyage to West Africa was absolutely uneventful excepting for one occasion when the look-out man thought he'd spotted a submarine emerging under our bows: "Action stations—submarine on the port bow" . . . It turned out to be a whale! We also had a cheap thrill by being only fifty miles from the "Scharnhorst." She went the other way, so we could talk about it.

Borradaile was a very pleasant companion and we spent many long days discussing movies and how they should be made. Bordie is a very experienced traveller and we re-enacted the famous "Boyhood of Sir Walter Raleigh" painting, with me as the audience. He kept impressing on me the danger of getting sunstroke and how quickly one gets burnt in the tropics—in fact he gave me a demonstration by getting sunburnt himself and having to stay in bed for two days. I was duly impressed and in consequence usually took adequate precautions.

We waited in Lagos some considerable time for air passage to Cairo. This being my first visit to the tropics I enjoyed myself hugely, even going so far as to cycle in the mid-day sun, just for the sake of Noel Coward, I suppose! I met a chap there called Frazer, a sergeant in the R.A.F. Photographic Section and previously a Kingsway Kodak wallah. He of course knew Wratten and Emile Lauste, so we had many a long yarn.

As soon as we unshipped at Lagos we hurried our film into cold storage, hoping that the few hours of hot weather wouldn't affect it too much. When I look at my film now and think what it's been through without tropical packing, it seems a ruddy miracle to me that it works at all. Of course it's very slow now, and with sunshine the result is extremely grey, but at least it's consistently so.

My present film has crossed the Equator at least six times, been in the Western Desert and in Malaya, where it's so humid that one can wipe the moisture off the surface of the film and the operation of loading in a changing bag is certain to make a perfect torrent of sweat run down one's arms on to the film.

Eventually our turn arrived for the Cairo plane. Bordie went off first, I suppose because he was a Captain and I was then still a second loot. About a week later I went, flying across the Belgian Congo. We stayed overnight in airways hostels, sometimes with enormous Africans with very sharp spears guarding our huts against lions.

At Stanleyville we were met, as are all planes, by a deputation of the ladies of Stanleyville, who took us on a sightseeing tour. We saw the elusive Okapi, Stanley Falls, and domesticated African elephants pulling carts and washing themselves in the Congo.

The hop after there was to Khartoum, where I met Borradaile on his way up to Abyssinia. He had orders to collect my Eyemo so that he could have a reserve camera to his Newman in Abyssinia. So I went off to Cairo cameraless.

Once in Cairo I was given the job of testing out a second-hand Devry combined sound and picture portable camera. I know nothing about sound, but by a stroke of good luck in my boarding house in Cairo was staying Flight-Lieut. Marcus Cooper, ex-chief of sound of Merton Park Studios. We worked together for some time on the camera, and had just got everything taped when orders came to cease operations on it. I was quite impressed with the outfit, and while the results were not M.G.M. they were quite pleasant.

Marcus and I had many talks about mutual friends such as Harry Waxman (where is he now?). The head of the Kodak 35 mm. department in Cairo was the son of Roseman of Kodak's in London. Young Rosie, as we all called him, carried out the very difficult job of pleasing everybody with the usual Kodak efficiency, aided by many cups of Turkish coffee. In Cairo I met some cameramen who knew chaps in London, and Jock Dean. There was a little hunchback French cameraman who had a still of Arthur Crabtree and himself in France hanging in the place of honour on his library wall.

The next Egyptian highlight was the return of Captain Jerry Massey-Collier from Greece. Jerry by some Herculean feat had carried his two Eyemos all during their last march, and arrived in the Cairo office with them tied together around his neck by the cross-strap of his Sam Browne. He was absolutely exhausted, which will not be surprising to anyone who has carried cameras and dodged dive bombers at the same time.

A few days later I was ordered to Crete, and as my camera had not arrived from England I took one of Jerry's Eyemos and some film and departed for Alexandria, where myself and a party of war correspondents waited for a passage. We would get on a boat and sail off for a few hours, only to turn round and come back to Alexandria. This went on for a fortnight, and what with being on a quarter-of-an-hour's notice and reading of the Hun success it became pretty nerve-racking, especially as towards the end we had unpleasant enquiries from the office as to where were the pictures of the Hun paratroops.

Judging by the condition of the escapees I photographed arriving in Alexandria it seemed that most people had to swim for it to get away from Crete, and as I am not very good at swimming with an Eyemo and a few thousand feet of film, there wouldn't have been any pictures anyway.

After it was all over we returned to Cairo, and I was immediately ordered to Cyprus on the chance that the same thing would happen there. So I went there with only the things I could carry in my pack—I even discarded my camera-case for the sake of lightness and carried the Eyemo on a strap.

Of course nothing happened, and I stayed in Cyprus for three months living on two pair of shorts, which meant some pretty efficient staff-work to get my spare change of clothes cleaned for the next day. Whilst in Cyprus I had the pleasure of meeting Drummond Drury, then a Lieutenant in the Navy. He gave me a first-hand account of his cycle trip across America to Hollywood. Cyprus is one of the few places I have visited in which I should like to live. It's extremely pretty and living is very cheap (brandy costs one English shilling a bottle).

One day a signal came recalling me to Cairo, so I jumped on a Greek steamer bound for Haifa in Palestine and had my first experience of Greek cooking, which is very oily and rather Soho, but nice for a change. Two things handed me a good laugh on this boat—the first was that throughout the entire voyage the Greek skipper had a double-strength gramophone blaring out Greek tunes and made the rather dangerous voyage into a kind of Thames pleasure trip. The other was that when the ship was in America some place discharging calves, the "eyeties" invaded Greece, so the

(Continued on Page 538)

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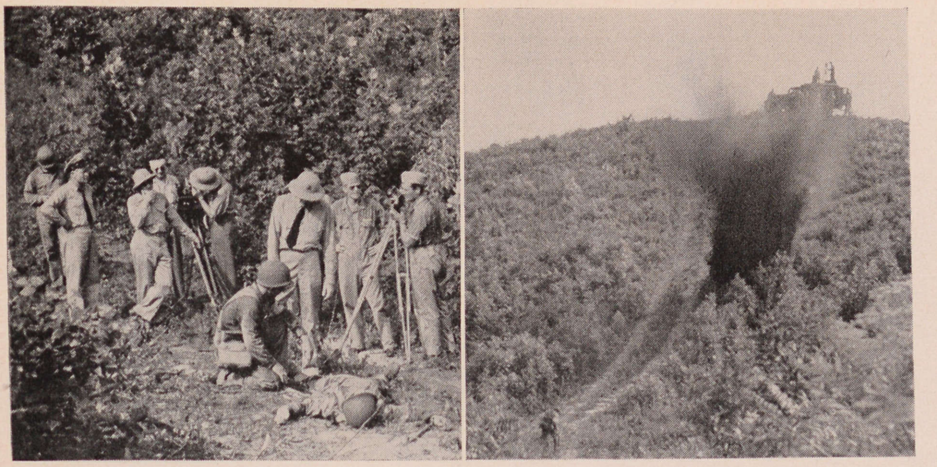
* The author, a Captain in the British Army Film Unit, sent this article describing his travels and adventures filming the War in the Middle and Far East in the form of eight Airgraph ("V . . .—Mail") letters to "The Cine Technician," official organ of the British Association of Cine-Technicians, by whose courtesy we republish it for American readers.—The Editor.



Left, a Marine Corps Training Film Unit makes a teaching film on "First Aid in the Field." Note use of both 35mm. and 16mm. equipment. (Photos by Staff Sgt. A. W. Rohde, U.S.M.C.) Below, Navy, Marine Corps and R.A.F. student cinematographers receive instruction in the "March of Time" Studios. Upper, making titles and inserts; note use of both 35mm. Mitchell and 16mm. Bell & Howell cameras. Lower, studying "rushes" on 35mm. Akeley viewer. (Photos Frank Calabria, "March of Time.")

HOW THE NAVY MAKES ITS TRAINING FILMS

By STAFF SGT. ALFRED W. ROHDE, JR, U.S.M.C.
and STAFF SGT. EDWARD R. BUTTERLY, U.S.M.C.R.*

"MAN all battle stations!" The command resounded throughout the ship, as the fleet swiftly maneuvered into assigned positions. A sense of readiness permeated the very gunwales of the ship and responded in the action of each and every man. Huge 16-inch guns, aimed by precise mathematical minds, reached for the horizon in search of their targets.

Uncle Sam's Bluejackets were at work—not on a problem, nor against an actual enemy, but in every sense, with responsibilities that are equally as important—providing the "set" for movie makers producing a training film.

It is early morning, and under closely-simulated combat conditions, the zero hour rapidly approaches. Khaki-clad Leathernecks, in complete readiness, are preparing to disembark—after the Navy's guns have played havoc with the enemy's beach installations, and "softened" them to a point where the landing party can make the attack.

Air reconnaissance has been going on for some time, and the deadly weapons of the Navy's air support are anxiously awaiting the given signal to "take off." Pre-assigned duties are being carried out in all parts of the various ships so that every detail can be completed in unison. Precise timing is of primary importance in the perfect execution of the attack.

The zero hour approaches, and like a magic military pattern the very walls of the sea begin to open under the fire of the ships' guns, the drone of the planes, and the shouting Leathernecks as they climb down the cargo nets in search of their prey.

Cameras, blazoned like felonious mutineers, are mounted at every vantage-point, adjusted by the skilled fingers of able photographers, constantly recording the important details which come within the scope of their lenses. Trained eyes and fingers check every minute detail for precision and technical accuracy. They have to be correct—retakes are costly during times like these.

On the shoulders of these men rests the responsibility of creating a graphic, up-to-the-minute library on the science of modern sea warfare, providing a quick, complete method for converting raw recruits into polished seamen. Their object—a film for every problem!

In devising a means to overcome the obstacles encountered in training adequate crews, the Bureau of Navigation delegated to the Training Film Section of the Bureau of Aeronautics complete supervision of the production of training films. The necessity for developing a "super-educator" to teach recruits rapidly, and fully was clearly realized.

To "advance the ball" toward that goal, the training film has become almost invaluable. This is only a small cog in the Navy's huge machine, but it is a vital one.

In producing training films, contracts are made with civilian producers who are required to comply with rigid regulations and closely-whittled schedules, for the finished products must be presented with a minimum loss of time. Fortunately, in accomplishing this end, they do not have to contend with the temperament found on a Hollywood set, for the actors are $50-a-month seamen, devoid of glamour, and trained to regard every wish as a command.

As a prime factor in maintaining schedules, and getting the job done, the directors, through the commanding officers of the Navy, receive strict compliance from the men—a compliance that is seldom seen in a "star-happy" Hollywood. There is no pampering, or suggesting, for an officer's word is law in a theatre of well-disciplined soldiers of the sea. Nothing is romantic in the work which they are doing, nothing is spectacular.

No importance is placed upon entertainment as portrayed on the theatrical screen. The one ambition of these men is to produce a smooth, technically perfect "celluloid school-marm" to assist in making our Navy the foremost and most efficient fighting force in existence.

A completed training film, whether produced by the Navy, Army, or Marine Corps, will display, even to the most critical educator, a patience for detail and the precise development of each point. Oftentimes in a Hollywood film, where entertainment is of primary importance, swift action, a suggestion, and the development of an idea take precedence, with technical accuracy running a close second.

Carelessly-staged action in a training

(Continued on Page 536)

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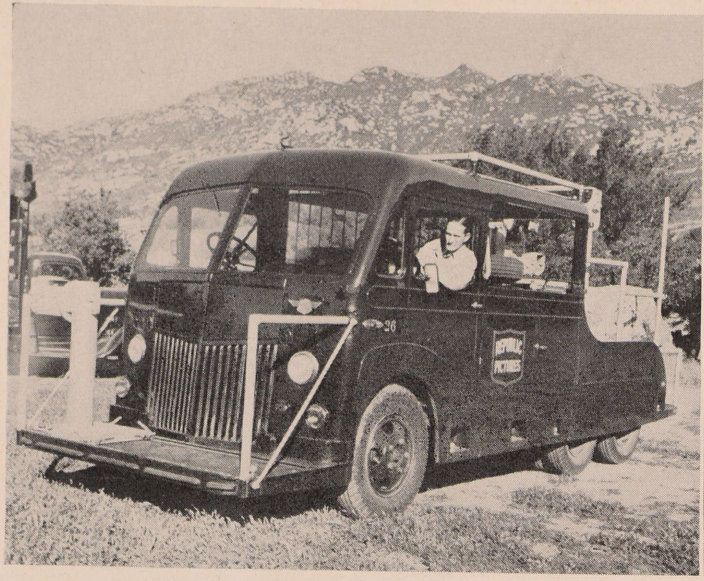
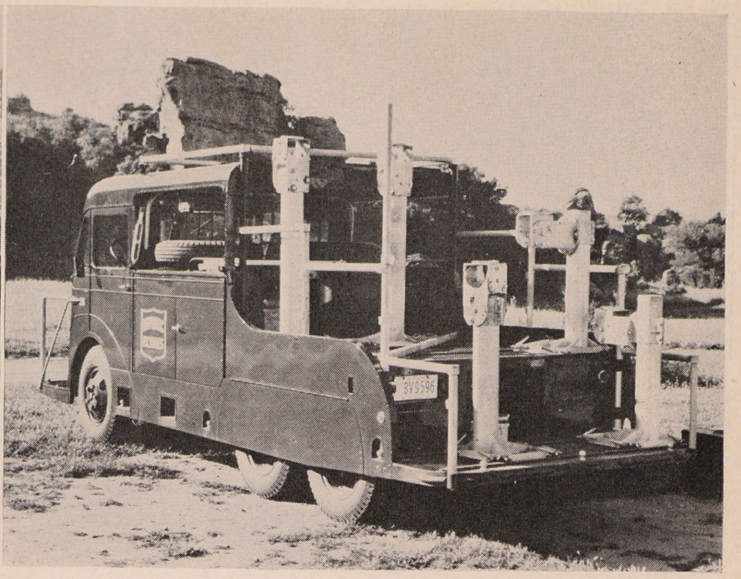
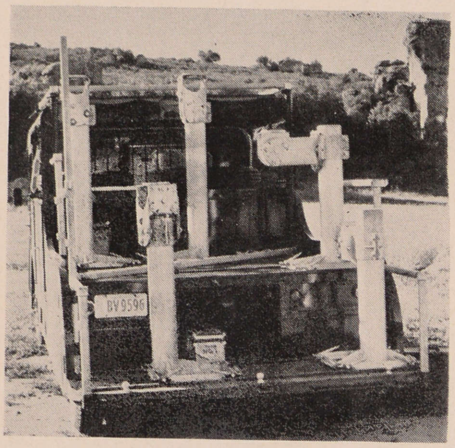
* Reprinted through the courtesy of "Our Navy" magazine.







Republic Develops A New Custom-Built Camera Car

By WILTON SCOTT

THE requirements of a satisfactory camera car or "insert car" for motion picture use are not only unusually exacting, but so contradictorily diverse that no strictly stock vehicle can conceivably meet them. To serve as a moving camera platform for making follow-shots of "chase" action on horseback or in speeding motors, the camera car must have acceleration and speed which compare favorably with that of a racer. At the same time, it must have heavy load capacity to be able to carry the weight of several camera outfits, and sometimes sound-recording equipment, booster lights, auxiliary generators, and a production crew often numbering ten or fifteen people as well. The moving shots must be rigidly smooth, so it must have the riding qualities of the proverbial pullman, even on dirt roads or across fields, and when unbalanced by camera-platforms fore and aft or mounted at the side or even atop the cab. It should also be easy to drive, and almost as manoeuverable as a jeep.

It has always seemed impossible to fulfill all of these requirements in a single vehicle, for to achieve one good quality, sacrifices would have to be made in some or all of the others. Speed and acceleration meant a sacrifice in carrying capacity and "ride;" increasing the load meant a sacrifice in acceleration, and so on.

The conventional method of making a camera car by rebuilding a large passenger car or truck—increasing engine power, altering gear-ratios, and "beefing up" the construction generally—has always left a great deal to be desired, as many a cinematographer can testify.

Therefore when the Republic Studio—probably the industry's largest producer of "Westerns" and action pictures—found themselves in need of a new and better camera car, it was quickly decided that no ordinarily available stock car would do, and that any conventional adaptation of a stock car or truck would be little, if any, better than existing equipment. So Republic's capable Chief Engineer, Charles L. Lootens, was handed the task of designing and building a camera car that would really meet today's needs.

The result is a radically different piece of automotive equipment. Not only does it meet and exceed the specifications the designers set themselves, setting new standards of camera car performance, but it is also easily adaptable to a remarkable variety of other uses, civil and military, outside the motion picture field.

Although designed from the ground up for its specialized service, this car makes a remarkably extensive use of stock automotive parts and assemblies. The frame and body are of course specially designed and built: but the power plant, running gear, and the like are commercially available parts, modified in some cases, and unconventionally assembled to produce a radically new result.

As will be seen from the illustrations, the car is an unusually compact cab-over-engine type fitted with dual rear axles, each equipped with dual wheels. The power plant is also dual, consisting of two standard Lincoln Zephyr 12-cylinder motors, each of which drives one of the dual rear axles. This twin-motor power plant, it was found, operates more economically than any larger, single unit capable of obtaining comparable performance with the car's loaded weight of more than 16,000 pounds.

A simple mechanical linkage permits shifting gears on both motor-drive systems with a single control. A similar linkage allows the use of a single accelerator for both motors, and a single clutch pedal, working through hydraulic linkage, operates the two clutches in synchronism. The designers found that no direct interconnection between the two motors and drive systems was necessary.

A dual steering control is provided so that when making running-shots the driver can look backward or to the side, concentrating his attention on controlling the speed of the camera car to match that of the horseman or vehicle being filmed, while an assistant steers the car by means of a removable auxiliary steering wheel.

The performance of this dual-motored truck is remarkable. The original speci-

(Continued on Page 528)

Aces of the Camera

XXIII:

Charles Lang, A.S.C.

By WALTER BLANCHARD

THE story of how Charles Lang, A.S.C., made his way up the cinematographic ladder to an Academy Award and secure recognition as one of the industry's foremost directors of photography does *not* run true to the form of the usual "success story." True enough, he worked and waited long enough for a chance to photograph a picture as a First Cameraman: but when that opportunity came, he certainly didn't stick to the Alger formula and magically enchant the star with his glamorizing camerawork, and romp off to success from the first day's work.

Quite the reverse! He admits that he flopped on his first picture, and was sent scurrying back to grinding second camera, very much in the dog-house. He waited years for another chance, and then acquitted himself with so little distinction that he was generally regarded as washed out—until he made a decision which at long last set him on the high road to success.

His story really begins about twenty years ago, when he was an earnest young law student at the University of Southern California. Officially, you know, he's Charles Bryant Lang, Jr.; his father, Charles B. Lang, Sr., was one of the industry's best laboratory experts, and was at that time heading a department in the laboratory of the now-forgotten Realart Studio. Charlie, Jr., was a particular pal of Frank Garbutt, Jr., whose father was Realart's head. And Garbutt, Jr., persistently urged Lang, Jr., to forget his law-books and join the rest of the two families in the technical end of Realart's production.

Eventually the younger Lang said yes, and went to work as a helper in Realart's lab, washing tanks and helping mix chemicals by day, and poring over his law-books in night classes, as he wasn't yet completely sure he wanted to trade a legal career for a photographic one.

But in time, that question was settled for him. Successive advancements in his work kept him busier and busier, with increasing responsibilities as he went through increasingly responsible posts in the various departments, until he found his time so fully taken up that he had no more time to study torts and malfeasances.

After a thorough grounding in all phases of laboratory work, he found an opening in camerawork and started in as assistant to H. Kinley Martin, one of Realart's ace cameramen, and a pioneer member of the A.S.C. After passing the usual apprenticeship as an assistant, he finally became what was then called a Second Cameraman.

"In those days," he will tell you, "the Second Cameraman had a very different job from that of today's Second or Operative Cameraman. It was the practice in those days to have two cameras on every shot: one, operated by the First Cameraman, photographed the negative used for domestic prints. The other, operated by the Second Cameraman, stood beside it and made the negative used for foreign prints.

"The Second Cameraman made all the inserts—usually on his own—and very often when there was need for what today we'd call a second unit, or some atmospheric shots, it was the accustomed thing to send the Second Cameraman out to get them, while the First Cameraman carried on with the more important scenes in the studio.

"Then the Realart studio shut down. And I starved. I got Second Camera jobs where I could, and occasionally shot First Camera for independent 'quickies,' for producers whose only idea was to get something on the film for as little money as possible. It was, as I look back on it now, grand training; but it was absolute hell to go through. Most of the time I didn't know where my next day's work was coming from (or when!) and plenty of times I was even more worried as to where I'd pick up my next meal or my next week's rent.

"Finally, though, I managed to get on at the old Lasky studio—one of the forerunners of today's Paramount—as a fairly regular Second Cameraman. Realart had been a Lasky subsidiary, and I found friends there among the executives, directors and cameramen who had been with Realart.

After a while they gave me a chance to do a picture as a full-fledged First Cameraman. It was about 1926, and the

(Continued on Page 530)

THROUGH the EDITOR'S FINDER

ON another page of this issue will be found the roster of the members of the A.S.C. who are now serving in the Armed Forces of their country. It's not sensationally large, as such lists go, but it's impressive if you consider what's behind it. For the A.S.C. is not a large organization; its membership includes all of the industry's recognized directors of photography—but there aren't so very many of them . . . not more than 150 or 160. And as they're the senior members of the photographic craft, their average age is probably well above the 45-year mark which is the preferred upper limit of the military.

Most of these men didn't really *have* to go. Virtually all of them entered the service by enlistment, and had almost literally to fight to make their way past the restrictions as to age, health and the like which hedge round the services. They gave up highly-paid civilian jobs in order to serve their country in the work they know best. And many of them were in uniform months and even years before Pearl Harbor.

They didn't ask for soft, desk jobs, or spectacular, swashbuckling ones, either. All they wanted was work—work making whatever type of motion pictures would be most helpful to the War Effort—work in which their rare and hard-earned "know how" would be invaluable.

We don't know where all of them are, or what they're doing. Some of them, we know, are scattered among the combat zones all the way from New Guinea to Iceland and England. Others, from their experience and qualifications are, we suspect in North Africa and Russia. Yet others are still at home, working against all sorts of obstacles, to turn out training films to make our growing Army, Navy and Air Force still more efficient.

But wherever they are, and whatever they are doing, we're proud of them!

•

FEATURE films built up from several more or less connected episodes are very much the style of late. On one of them, now in production, an interesting incident recently happened. The director of photography, on loan from another studio, who filmed the first episode, was recalled by his studio for another assignment, and another cinematographer took the film at the start of the first episode. This incident gives rise to a most intriguing speculation—probably impractical in many ways, but none the less interesting for all that. We talk a great deal about the individualized styles of our various leading directors of photography: wouldn't it be interesting, therefore, to see five or six of them displayed in a single picture, with each cinematographer given a chance to treat one episode of such a film as he saw fit?

THE other day we were talking to an officer of one of the military photographic units. He remarked that some of his superiors, who weren't familiar with Hollywood's motion picture production, had difficulty understanding how directors of photography—often without formal college education—could be considered as officer material. "They're afraid, too," he said, "that the years of studio experience have given them the so-called 'Hollywood touch' in its worst sense—an urge for questionable showmanship and publicity which are out of place in making serious combat or training films."

Somehow, we wish we could give these officials a chance to watch the average director of photography at his daily work. We've an idea their reaction would be like that of a noted automotive engineer we once took through a major studio. At every turn he'd run into some new piece of equipment—a camera-boom or the like—and exclaim, "Why, dammit, that's good, sound engineering. I didn't think you had any brains like that in Hollywood!" Yet the brain which conceived most of those examples of good, sound engineering had left high-school for a job in the old Edison studio nearly forty years ago. But he had substituted for the engineering degrees he didn't have, more than four decades of practical, commonsense "know how" which can only be obtained at the college of cinematic experience.

Today's average director of photography is like that, though he probably hasn't been photographing pictures quite so long. He is a unique combination of creative artist, painstaking technician, and well-balanced executive. In charge of photographing modern major productions, he is actually an executive charged with the responsibility of seeing to it that from $6,000,000 to $8,000,000 of his firm's money reaches the screen in saleable form each year. He has constantly to make decisions between ideas and treatments which may be desirable, and those which, if less sensational, are more practical when weighed against the factors of production time, effort and workability. All too often it is an unmentioned but tacitly acknowledged part of the cinematographer's job to keep the feet of the director, writers and others on the ground of production practicality. That's why producers feel confident (as they'll admit in off-the-record conversations with their cameramen) that they can make a director out of anybody—as long as he's backed up by an experienced cinematographer who can keep the inexperienced newcomer from making costly blunders.

In all of this, the cinematographer's greatest asset is his vast fund of experience in making pictures—experience which can be gained only through years of practical work. No school or college exists which can teach it, for it is something in which technical theory and actual practice are often at variance. A good analogy might be found in Naval gunnery which, they say, while it's a highly technical science, is also something in which practical experience provides something that can't be learned in classrooms. The man with all the theory at his fingertips often can't hit the target as well or as often as the practical man with perhaps less mathematics but more of an experienced "feel" for gunnery. Cinematography is like that, too; and the only way to get that invaluable "know how" is by actually making pictures, year in and year out, under every imaginable condition.

•

A FEW weeks ago we saw a picture in which the star went through most of her part playing an adolescent, with little or no make-up, and only turned on the mature glamor in the last few sequences. This particular star, while a fine actress, has always been something of a problem child so far as cinematographers were concerned, for she had her own ideas on make-up (or its absence) and flatly refused to listen to well-meant advice from the men who photographed her.

But in this picture, an equally independent and plain-spoken cameraman forced her, probably against her will, to wear a proper make-up in the scenes where she was supposed to look glamorous. The result was amazing: for picture after picture she had consistently appeared with a photographically dirty face, which seriously handicapped her acting efforts. Now, for the first time, she appeared as the charming young lady she actually is. For the first time, she had given the man at the camera a chance to give her good photography, rather than makeshift lightings which could never completely erase the effects of bad make-up.

A short time later, we saw her next picture. Evidently she had taken the lesson to heart, for her make-up was good, and the director of photography had a real chance to give her a glamorous screen appearance.

There are all too many of our top players—men as well as women—who need a similar lesson. We wish they could be persuaded to take the trouble to study these two pictures, and see for themselves the difference that good make-up makes, or let a cinematographer make a simple, comparative test to show them that working with no make-up, where make-up is really needed, or working with an unsuitable one, is not art, but simply a hindrance to both cinematographer and player.

Simplifying Script Breakdowns For Training Film Production

By JAMES A. LARSEN ,Jr.

"BREAKING DOWN" a script before shooting, so that all scenes on a given set or location can be planned and photographed together (regardless of their actual relationship in the picture's continuity), and so that such details as actors' calls, costuming, props, preparation of sets, technical facilities, transportation, and the like, can be organized efficiently, is so completely a part of Hollywood studio routine that it is taken as a matter of course. An experienced assistant director or unit manager will break down the script as a natural part of his pre-production staff-work.

But the smaller organizations away from Hollywood, making industrial, educational, and most recently wartime employee-training films, whether in 35mm. or 16mm., do not, as a rule, command the services of skilled production assistants of this type. As a result, they do not always enjoy the benefits of completely efficient pre-production planning. Yet since these producers work on infinitely smaller budgets than Hollywood's theatrical-film producers, and usually with a much narrower margin between profit and loss, they need it even more.

In previous articles, the writer has pointed out some of the more elementary technical decisions which must enter into the pre-production planning, as, for example, whether the subject in hand calls for black-and-white or Kodachrome, reversal-film or negative-positive; whether to use sound in the form of synchronous dialog or narration with or without music and sound-effects; whether to record by single-system or double-system methods, and so on.

But in addition to this—and regardless of the decisions reached as to these technical fundamentals—the training-film producer must further plan which scenes to make on location and which can best be made in the studio. For scenes to be made on location, he must make detailed arrangements in advance for permission to photograph, for availability of power, for transportation, for local 'acting' talent (if needed) and many other details. For scenes to be made in the studio, he must plan to rent, adapt, or design and build suitable sets, and of course to decorate and furnish them, and provide suitable lighting and other facilities.

To facilitate all of this essential pre-production planning, a detailed script of the entire production must be prepared. In today's employee-training films as in the commercial and classroom films of normal times, it is very decidedly advisable to set forth at the start of the script the objectives which the film has, and the audiences for which it is designed. This may seem unimportant, but a moment's consideration will show that it is not: a film intended to demonstrate an improved technique of welding to an audience of experienced welders, for example, can wholly ignore basic fundamentals which would be essential in a film intended to teach welding to novices.

Then should follow a detailed synopsis of the theme or story of the picture, followed by the conventional scene-by-scene description of the action and dialog.

SCENE FORM

TITLE OF PRODUCTION________________SCENE NUMBER________

TYPE OF SCENE: Silent ☐ Single-system ☐ Double-system ☐

LOCATION INTERIOR ☐ } LOCATION:________
LOCATION EXTERIOR ☐ } ________
STUDIO INTERIOR ☐ } SET:________
STUDIO EXTERIOR ☐ } ________

TIME OF SCENE		TIME OF YEAR	
MORNING	☐	SPRING	☐
AFTERNOON	☐	SUMMER	☐
EVENING	☐	FALL	☐
NIGHT	☐	WINTER	☐

DESCRIPTION OF SCENE:________________

FIELD OF CAMERA: Long-shot ☐ Medium-shot ☐ Close-up ☐ Insert ☐ Lens:______
CAMERA POSITION Fixed ☐ Moving ☐ Low ☐ High ☐ Eye-level ☐

FURNITURE REQUIRED	PROPS REQUIRED

CHARACTERS REQUIRED	COSTUMES REQUIRED
1.	1.
2.	2.
3.	3.
4.	4.

DESCRIPTION OF ACTION:________________

DESCRIPTION OF SOUND: Dialog ☐ Narration ☐ Music ☐ Sound-effects ☐
Pre-Recorded ☐ ________
Sync-Recorded ☐ ________
Post-Recorded ☐ ________

TRANSITIONS:
IN: Fade-in ☐ Wipe in ☐ Dissolve in ☐ Direct cut ☐
OUT: Fade-out ☐ Wipe-out ☐ Dissolve out ☐ Direct cut ☐

CONTINUITY: *(Direction of all entrances and exits, action, dialog, etc.)*

Once this point has been reached, the author has found it very convenient to transfer the script to printed scene forms like those reproduced herewith. Each scene form should contain all of the necessary data concerning a single scene, on a single sheet.

The use of these scene forms provides a method by which the script can very easily be broken down, even by comparatively inexperienced assistants, thereby to a considerable extent offsetting the

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A.S.C. on Parade

We happened in on an impromptu banquet at Paramount's camera table the other day. Joining a group including **Camera Chief Roy Hunter**, DuPont's **Simeon Aller** and **Pete Shamray**, **Charlie Lang, A.S.C.**, **Ted Sparkuhl, A.S.C.**, **Dan Fapp, A.S.C.**, and Navy Lieutenant **Al Gilks, A.S.C.**, we were amazed when the waitress unexpectedly brought in a huge platter laden with some of the finest venison we've ever tasted. The venison, it turned out, was a gift to the Paramount camera gang from **Archie Stout, A.S.C.**, whom **Al** had visited at **Archie's** tungsten mine in the High Sierras. **Archie**, you know, has exiled himself there "for duration," digging tungsten from his mine to help the War Effort. A cheery letter from him tells us he's with us in spirit, though, if not in the flesh. "Operating a tungsten mine is no picnic," he writes. "I think a Director of Photography has a cinch by comparison—even if the Director is a louse, the Producer an inhuman ogre, and the Star is impossible to photograph. Just try breaking ice every morning to wash your face for breakfast . . . and try eating cold fried eggs (without bacon) for breakfast when you do!" Yep, **Archie**, our hat is off to you, and we'll be looking forward to seeing you when the mine gets snowed in for the winter!

•

Joseph Valentine, A.S.C., off to Washington and points unknown as **First Lieutenant Valentine** of the Army's Signal Corps.

•

Floyd Crosby, A.S.C., probably America's top filmer of documentary pictures ("The River," "Power and the Land," "Fight for Life," etc.), is also away and in uniform as an officer of the Army Air Force.

•

Rudy Maté, A.S.C., is another member going the military route. Expecting his Signal Corps Commission to come from Washington any day, he's resigned from the A.S.C. Board of Governors, on which he will be replaced by **Joe MacDonald, A.S.C.**

•

And we understand **Peverell Marley, A.S.C.**, is now **Sgt. Marley** of the Air Force, and in line for Officer's Training.

•

Universal's been keeping **John W. Boyle, A.S.C.**, so busy on production that he, too, has retired from the Board, yielding his seat to **Ted Tetzlaff, A.S.C.**—or should we say **Theodore**, the way his screen credit has been reading lately?

•

Greetings to five new members of the A.S.C.—**Robert C. Bruce, A.S.C.**, **Mark Davis, A.S.C.**, **Stanley Horsley, A.S.C.**, **Fred Mandl, A.S.C.**, and **Robert L. Surtees, A.S.C.** And at the same time, a good-bye salute to **Mandl**, who has enlisted in the Signal Corps.

And congratulations to **Harry Wild, A.S.C.**, too, on his term contract with producer Sol Lesser. **Harry's** first picture will be "Stage Door Canteen," chock-full of celebrities of stage and screen. We'd like to spare an orchid to Lesser's publicity-man, also, for the acumen he showed in including **Harry's** name in that series of trade-paper ads plugging the all-star talent on the pic.

•

Charles G. Clarke, A.S.C., gets his first crack at a Technicolor feature with assignment to "Hello, Frisco, Hello" for 20th Century-Fox. **Allen Davey, A.S.C.**, is his Technicolor collaborator.

•

Dan Fapp, A.S.C., got a surprise the other day when he came in to the A.S.C. office to pay his dues. Seems his wife had paid 'em the day before!

•

Jackson J. Rose, A.S.C., beaming over the critical raves about his photography of MGM's "Northwest Rangers," gets the assignment to photograph "Fighting Men," a War Department Training Film, also at MGM.

•

Nice to see **Alvin Wyckoff, A.S.C.**, busy at 20th Century-Fox.

•

Charles Lang, A.S.C., going around the Paramount lot with a furrowed forehead. He's been assigned to photograph "So Proudly We Hail," which presents the problem of balancing wartime realism with the task of keeping three of the industry's top glamour-girls looking glamorous as Bataan nurses.

•

Note to those who might be worried over an item last month that **Phil Tannura, A.S.C.**, had borrowed our pet Craig viewer to edit some of his personal 16mm.: he not only borrowed it, but brought it back! Considering the scarcity of the things, that puts him in line for our own V. C.—Very Conscientious!

•

Roy Hunt, A.S.C., draws the assignment to RKO's "I Walked with a Zombie." Incidentally, now that gas rationing is here, wonder if **Roy** will replace the steam engine in that wonderful super-car he built—? It can burn kerosene, fuel oil or hair-tonic, you know!

•

Ray Binger, A.S.C., between special-effects chores for Sam Goldwyn, directs the photography of an Army Training Film on "Administration of Military Justice and Courts Martial."

•

If you heard fragments of tattered English floating around Lakeside the other day it was **Tony Gaudio, A.S.C.**, expressing his sentiments on missing nine two-foot putts in succession!

•

Add **John Fulton, A.S.C.**, to the list of motorbike riders. He putt-putted out of the Universal studio the other day just as we drove in . . . we didn't see him, though, 'cause we were looking for his big Cord.

•

James Wong Howe, A.S.C., free-lancing now that his Warner contract is through, gets the assignment to "Never Surrender," for Arnold Pressburger at United Artists.

•

Congratulations to **Nick Musuraca, A.S.C.**, on the birth of a daughter, Anna Marie.

•

Now that David Selznick has definitely turned over most of his production assets to 20th Century-Fox, we understand **Stanley Cortez, A.S.C.**, and **George Barnes, A.S.C.**, will move out to Westwood, too. They're certainly assets in any man's studio.

•

A surprise visitor the other evening was **Gordon Pollock, A.S.C.**, just back from the East where he demonstrated some of his photographic inventions to Army big-wigs.

•

Another pleasant surprise was seeing **Leon Shamroy, A.S.C.**, at November's A.S.C. Technical Meeting.

•

Memo to **Karl Struss, A.S.C.**: those stills we shot the other day during our discussion of incident vs. reflected-light meters are ready for you any time you want to come up and see who won!

•

Thanks to **L. Wm. O'Connell, A.S.C.**, for the nice talk he gave at the last Technical meeting on shooting 16mm. for blow-ups. And thanks to **Johnny Boyle, A.S.C.**, too, for the loan of his sound projector for the same meeting.

•

Jerry Ash, A.S.C., tells this one about the "good old days" at the old Universal. Seems the Stern brothers, pioneer comedy producers, were deeply concerned over a competitor, Henry (Pathe) Lehrman, and sent a scout to catch the latter's first picture. The scout reported there was nothing to worry about—that Stern's comedies were every bit as good. "Don't tell me," erupted Abe Stern, "that they're as bad as all that!"

•

They say **George Meehan, A.S.C.**, did a super-spectacular job on the Technicolored "Desperados" for Columbia. We're looking forward to seeing it!

•

Frank Redman, A.S.C., assigned to film "This Land is Mine" for RKO.

•

Marcel le Picard, A.S.C., films PRC's "The Lady from Chungking."

•

And **Jack Greenhalgh, A.S.C.**, is in charge of the cameras on the untitled first of PRC's new "Billy the Kid" Western series.

PHOTOGRAPHY OF THE MONTH

GENTLEMAN JIM

Warner Bros.' Production.
Director of Photography: **Sid Hickox, A.S.C.**

The life story of a prizefighter—even if produced on an "A-picture" budget—isn't the sort of thing you'd ordinarily expect to see treated as an example of fine dramatic cinematography. But Sid Hickox, A.S.C., has made "Gentleman Jim" precisely that. Even in the fast-moving fight scenes he has maintained photographic values very much better than you usually see in "action" pictures; and in the rest of the picture he has taken advantage of every possible opportunity of mood and locale to make the film one of the most satisfyingly photographed pictures we've seen of late.

The "gay 90's" setting helps this a great deal. So, too, does the fact that many of the fights shown occurred at a period when prizefighting was illegal, and were accordingly staged surreptitiously at night in hidden arenas, on barges, and so on. In these scenes Hickox' effect-lightings do a great deal to establish the mood of the action. His treatment of the scenes in the opulent Olympic Club furnish an excellent dramatic contrast, and again his camera-treatment aids greatly in outting over the dramatic effect.

The prize-fight sequences are of course the highlights of the picture, and they certainly rate praise for an unusually efficient operative crew. They are some of the best examples of fine operative camerawork we've seen in some time.

The several interesting montages are credited to Don Siegel and James Leicester. They're more than ordinarily effective.

THE BLACK SWAN

Twentieth Century-Fox Production (Technicolor).
Director of Photography: **Leon Shamroy, A.S.C.**

Leon Shamroy, A.S.C., very decidedly goes to town with this richly-Technicolored pirate story. Indeed, after seeing "The Black Swan" it's hard to think of a pirate story in monochrome.

Shamroy paints his picture in broad, vivid strokes, as becomes a story in which colorful settings and colorful costumes and action combine so vividly. Yet on analysis, you'll notice that much of the color is actually subdued, toned down either in the actual set or costume, or toned down by Shamroy's careful use of strong effect-lightings, so that while you get an overall impression of strong color, you get it actually without being chromatically surfeited.

This reviewer particularly liked Shamroy's use of vigorous effect-lightings, even though some of them seemed skating a bit close to the danger-line of extreme low-key lighting. This treatment, too, made possible the use of many very striking portrait-lightings in the closer shots of the principals. Indeed, your strongest after-recollection of "The Black Swan" is of some of the effect-lighted close-ups of Tyrone Power and Maureen O'Hara.

JOURNEY FOR MARGARET

Metro-Goldwyn-Mayer Production.
Director of Photography: **Ray June, A.S.C.**

"Journey for Margaret" is another picture produced on a typical Director W. S. Van Dyke "hurry-up" schedule. It was done quickly—but thanks to Ray June, A.S.C., it doesn't give that impression on the screen. It certainly isn't the best work Ray June has done, but his sure artistry gives the picture a visual smoothness it wouldn't have had in less capable hands.

The story is laid largely in London at the time of the blitz, and affords a wide range of dramatic moods and settings, ranging from highly dramatic scenes in air-raid shelters, bombed homes and hospitals to smoothly luxurious scenes in the hotel and in peaceful America. Following all these divergent moods, June gives a truly facile camera-performance. And his treatment of the players under all these varying circumstances is, as usual, flawless.

The process scenes are particularly effective, many of them using as backgrounds news shots made actually during the blitz.

Dramatically, even in the hands of a director not inherently suited to a story of this type, "Journey for Margaret" is worth seeing. Without attempting to point a moral, it contains a stirring preachment on why we're in this war, and why we must win it.

ONCE UPON A HONEYMOON

RKO Production.
Director of Photography: **George Barnes, A.S.C.**
Special Effects by **Vernon L. Walker, A.S.C.**

You may or may not like the story of this picture: most of the reviewers seem to, even though this particular one didn't. But photographically it's well up to the standards you expect from George Barnes, A.S.C.

It couldn't have been a particularly easy picture to photograph, for it's full of abrupt changes of both locale and mood. There's drama, played in high-key, luxurious settings, and comedy played in semi effect-lightings and against an essentially tragic background. Barnes has done smoother jobs—but none which more completely showed his versatility and his mastery of his medium.

His treatment of the players is generally good. As a matter of fact, we haven't seen Ginger Rogers so effectively photographed in a long time. Some of it is, no doubt, due to the fact that for the first time in many years she appears to have been persuaded to wear a really good make-up; but much of the credit surely belongs to Barnes' skill, too. On the other hand, we were rather disappointed in Cary Grant's appearance, as we have been in several of this star's more recent pictures. What we saw on the screen gives us to suspect he is either wearing much too dark a make-up, or none at all. In neither case does he give the cinematographer a chance.

Vernon Walker's special-effects work is, as usual, excellent, especially in the scenes in bomb-ravaged Warsaw and in the Paris cafe. The concluding miniature, however, should not be held against him, for while it is certainly not up to the Walker standard, the action was planned and played for a laugh, and could probably not have been handled any other way.

SOUTH AMERICAN NOTE: During the last several months we have carried a number of articles dealing with the use of 16mm. Kodachrome enlarged to Technicolor for theatrical release. Our Latin-American readers will, we are sure, be interested to know that a major example of this is playing in their theatres now, in Walt Disney's "Saludo Amigos!" All of the "live-action" scenes of this production were photographed in 16mm. —largely by Walt himself—and enlarged to 35mm. for use in the picture. While we have not been privileged to see the entire production, we have seen some of it, and we feel sure our readers in Latin-America will be interested in seeing what can be accomplished by this new development in cinematography.

WAKE ISLAND

Paramount Production.
Directors of Photography: **Theodor Sparkuhl, A.S.C.**, and **William Mellor, A.S.C.**
Aerial Photography: **Elmer G. Dyer, A.S.C.**, and **W. Wallace Kelley, A.S.C.**
Second Unit Photography: **Harry Hallenberger, A.S.C.**
Special Photographic Effects: **Gordon Jennings, A.S.C.**
Process Photography: **Farciot Edouart, A.S.C.**

"Wake Island" is a picture everyone should see, not alone because it is timely, and chronicles one of the most heroic episodes in American history, but because it is a picture that's likely to have a lasting influence on the photographic trends of the next few years. The multiple-threat team of cinematographers who brought it to the screen have given it the severely realistic visual treatment of a documentary—but with a difference. The picture has been carefully planned so that when the dramatic moments arise, they are enacted under conditions which permit a visually dramatic camera-treatment without in any way lessening the essential feeling of realism.

With fast films, ordinary house-lighting Mazdas in room lights and photographic units can take the place of Photofloods.

Lighting *Without* Photofloods

By WILLIAM STULL, A.S.C.

PHOTOFLOODS are gone "for duration!" At least they are so far as Mr. and Mrs. Average Amateur are concerned, for beyond present dealers' stocks they're reserved for Military, for Defense Plants, and for snooty civilians with priorities. The mainstay of interior home moviemaking has marched off to war!

Don't take this to mean, though, that interior cinefilming is also eliminated "for duration." Long before the versatile Photoflood was born, pioneer home moviemakers were filming interiors under artificial light, and doing quite well, thank you. Today, we can do what they did—and do it much better because we've better materials to do it with.

When the W.P.B. "froze" Photofloods and ordered the manufacture of many other types of lamps discontinued, they were really much kinder to photographers than they might have been. For they left unrestricted at least three types of lamps which can be extremely useful photographically.

First of these are the standard Mazda lamps used in ordinary household lighting, and including some which while still low-priced, and small enough to be used in many types of photographic lighting units, are *almost* as powerful as a Photoflood.

Second are the "R-type" spot and flood lamps which, with their built-in silvered reflector bowls, can be used alone, without the usual photographic reflector units.

Third are projection lamps, including several types with screwtype bases which will fit any standard lamp-socket.

Now we might as well admit at the start that all of these substitute lamps have a common drawback insofar as the Kodachrome enthusiast is concerned: they burn at a lower color temperature than Photofloods, and their light is much redder. But this can be corrected by means of compensating filters which several manufacturers supply. Even though the use of a filter for indoor Kodachroming means a loss of speed, it's certainly better than not being able to shoot at all. And of course for black-and-white, the color temperature factor hardly matters.

As a matter of fact, shooting in black-and-white on today's fastest 16mm. and 8mm. reversal films like Eastman's Super-XX and Agfa's Triple-S Pan, which have Weston ratings of around 80 to incandescent light, many of us have found the usual Photoflood illumination too intense. Often in making close-ups lit with one or two No. 2 Photofloods which, with the slower, pre-Super-XX types of film I would have been working with my lens at *f*:2.5 to *f*:1.9, with the faster film I've had to stop down to *f*:4 to *f*:6.3 or even smaller. In some tests I've gotten very satisfactory exposures using only the light coming from a three-globe table lamp—a total of less than 200 Watts—and of course using my lens wide open.

This plays right into your hand now that you can't get Photofloods. Using these fast films, we can shoot surprisingly good interior scenes by merely putting 100-Watt globes into the normal shaded reading and stand lamps in a room, and perhaps using slightly larger globes—200 to 300-Watt Mazdas—in some of our photographic units for modelling lighting.

These higher-powered house-lighting bulbs are usually a bit larger than the familiar Photofloods, so they won't in every case fit the reflector you've been using Photofloods in. The largest of these globes equipped with a standard medium screw base — the 300-Watt "300M" globe—is about the size of a No. 4 Photoflood, slightly less than ⅔ as much light as the familiar No. 1 Photoflood. It costs about twice as much as a No. 1 Photoflood: but its rated burning life is some 750 hours as compared to the Photoflood's three!

The projection globes, speaking generally, are more compact. The 500-Watt screw-based projection globe which General Electric lists as "500T20" is a tubular-shaped bulb about a quarter of an inch longer than the No. 2 Photoflood, but a trifle slimmer, and is likely to fit into most reflectors in which you'd normally use a No. 2, though sometimes a 10c socket extension may be needed. It delivers about ⅔ as much light as the No. 2, and is a good bit more expensive; but again there's an offsetting saving in that its burning life is almost ten times that of a No. 2 Photoflood.

Using these lamps, you'll find a definite advantage over Photofloods in the wider range of lighting effects they can produce. From the professional cinematographer's viewpoint, the Photoflood was open to criticism because it was available *only* as an inside-frosted bulb, which gives a somewhat diffused, soft light. The professional cinematographer prefers his lamps in clear bulbs which, when used "raw," give a much "harder,"

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Staging Miniature Fires For Amateur Defense Films

By JOHN P. FULTON, A.S.C.

THE secret of getting convincing miniatures with substandard cameras lies in making sure the miniature is not *too small.* One of the basic rules of miniature work is that, generally speaking, the smaller the scale to which your miniature is built, the faster your camera will have to operate to produce an illusion of normal size on the screen. Very few substandard cameras will operate much faster than 64 frames per second: therefore miniatures to be photographed with them should certainly never be built to a scale smaller than one-half inch to the foot; one inch to the foot is preferable, and even larger-scale miniatures are desirable if you can get them.

This is especially true of miniatures in which you burn down buildings. Unless the miniature is built to a fairly large scale, the flames will be bigger than the buildings. And as they're small in actuality, even 64-frame speed won't slow them down enough to keep them from looking phoney on the screen. That combination of oversize flames that flicker too quickly will show up your scene as a miniature no matter how carefully you build and photograph it.

Not long ago I saw an amateur-made Civil Defense film which proved this point beautifully. There was a sequence in which a house burned down, ostensibly from an incendiary bomb. The house and its setting were beautifully made to scale; but when the fire started, the flames burst out quickly and went three or four times as high as the house! In real life, you'd judge them to be from four to six stories high: but they flickered so fast on the screen you knew the scene couldn't be anything but a miniature.

We learned later that the picture had been made on an extremely slim budget, and it had only been possible to build the miniature to a scale of 1/16th inch to the foot. Thus, supposing in reality the two-story house shown would have been about 20 feet high, the miniature would only be about an inch and a quarter high. No wonder the flames were too big—though they were really only three or four inches tall!

But suppose that house had been built to a scale of one inch to the foot. The same four-inch flames would, in comparison, appear to be five feet high, instead of sixty. And a rate of movement which is absurdly fast in a sixty-foot flame would be quite natural in a five-foot one.

How you build your miniature will depend largely upon how you want to handle your fire from a picture viewpoint. In making fires for studio productions, sometimes we may want to burn the building completely down, all in one take, and sometimes we may want to keep it burning for days at a time, while we get a variety of different camera-angles of the fire and its details.

Where we want to burn the building completely down, more or less at one take, we simply build a fairly complete building out of wood to the desired scale—usually at least one inch to the foot, and sometimes an inch and a half or two inches. Soft pine is probably as good a material as any for this, as it works easily and burns well.

But where we want to burn the miniature more slowly, while we get a large variety of angles on it, we use a different construction. The parts we don't want to burn are made of plaster, carefully cast or molded into the desired shape. The parts we want to burn are made of wood, and often we'll make several duplicate sets of each, so that we can make several takes of each bit of action.

This way, we'll burn out a piece and then when the scene is shot, extinguish the flame with a water spray, remove the burnt section, replace it with a fresh one, and go on again.

I remember in one picture we made not so long ago—I think it was one of our horror pictures, where we burned our monster and a few assorted villains in an old castle—we wanted plenty of close-up angles, even to close-ups of the shingles on the roof as they curled, caught fire and burned. We made a complete miniature roof-panel—shingles and all—of wood, and burned it. The result on the screen was perfect.

Where we want to show a wall collapsing into the flames, we simply make a regular section of the wall in miniature, and carefully weaken it at just the points where we want it to give way. Then at the appropriate time, we can pull it in the right direction with a piano-wire, so fine it is invisible to the camera.

Oddly enough, while bona fide fires in real life start and burn much too quickly to suit us, photographic fires—whether full-scale or miniature—usually need both encouragement and direction.

The best accelerator I've found for this purpose is a combination of gasoline and kerosene sprayed where we want the fire to burn. Gasoline alone gives an actually vicious blaze, but not one that is particularly photogenic. Gasoline alone burns too fast, too, so that the fire is over almost before it is really started. The admixture of kerosene gives body to the flames, and also has more "staying power." The kerosene seems to adhere to the surface of your miniature (as you probably know already if you've used kerosene to start a grate or campfire) so that you get a very fine blaze apparently burning vigorously—but you can still extinguish it handily with water, re-spray with your gasoline-kerosene mixture, and make another take immediately.

Where the spot you want to burn is easily accessible, an ordinary hand-spray like a Flit-gun will do adequately. But for really professional use, a larger garden sprayer like the "Hudson" garden sprays will prove ideal. That's what we use at the studio. You can run a line of piping into your miniature set, concealing spray nozzles where they'll do the most good, pour the gas-kerosene mixture into the tank, work up whatever pressure you need with the hand-pump, and then, when you turn the valve, you get the spray just where you want it, and at just the strength you want.

The nozzles have to be concealed from the camera, of course, and for the best results they should usually play against some sort of a baffle so that the blaze from the spray is reflected back through the window, door, or whatever it may be, to give the camera the right illusion. On large miniature fires—like that one at the start of "Saboteur"—I've sometimes used six, eight or a dozen rows of these nozzles sunk in the floor. With separate controls, you can turn each row on individually, and make your fire spread precisely according to directions, as once you've got the first line of nozzles started, the others can be placed so they'll overlap enough so that each row will catch from the one before it.

It isn't a very good idea to try and light these gasoline-kerosene fires by hand. When they start, they do it right now, and your assistant may not have time to get out of the way safely. Besides, even in a large-scale miniature set, your fire is likely to be almost over before your assistant has gotten out of camera range! We usually start our fires by a squib fired by remote control through an electric detonator. That way, we can be sure the fire will start precisely where and when we want it to, and that we'll be able to have the cameras turning from the first flicker.

Sometimes you may want to get the peculiar effect of a petroleum fire, with a lot of heavy, oily black smoke billowing up, with flashes of reddish flame licking out of the smoke now and then, like the newsreel shots you've seen of the fuel tanks burning at Pearl Harbor and Midway. To get this effect, put

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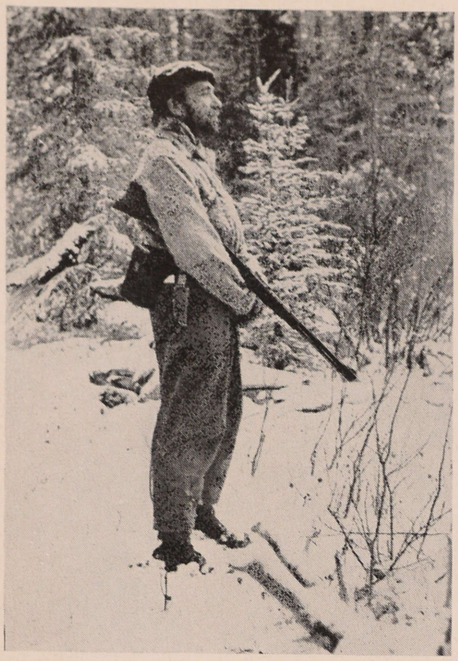


CAMERA PIONEERING ALONG "AMERICA'S BURMA ROAD"

By GEORGE BLAISDELL

BATTLING with a desperate fifty-pound salmon as it swishes wildly about fast-falling, tumbling waters of a rocky mountain stream an Alaskan fisherman struggles to retain his precarious footing amid surrounding boulders as he tries to shorten his line and bring to book his fighting antagonist. It is a truly sporting event, one worthy of any human being's money. It is a grave question as to the winner—the solid and robust fisherman, swaying this way and that, or the fighting fish, one-quarter his weight, pulling and dragging to win release from this unaccountable restraint to his hitherto inviolate freedom.

But a few minutes later there is thrown on the screen another mountain stream, of greater volume and rapidity and downward slope than possessed by the great brook on which we have just gazed. Flying up-stream, some of them above the surface and in plain view to the man out front—in this case we should say the woman—were salmon, enough of them for at least one to be always in view.

They were flying high and handsome, how far in some cases this reporter, (having at least a slight regard for his reputation for veracity!) declines to state in terms of precise linear feet.

From the heavily shaded shore there emerge into the open a big black mother bear and her not too small cub. The two amble down to the water and calmly survey the charming scene. The mother bestows just a glance on the cub, who closely follows her movements.

The mother nonchalantly strolls into the stream, her great bulk immune to the force of the water. Without more than an instant's delay she shoves her nose under the waves and brings up in her teeth a fighting, twenty-inch-long salmon. Back to the shelf on the shore she waddles. There she proceeds to tear it into proper bits for the benefit of her offspring—with which impromptu meal she herself shares—and then Mrs. Nevermiss sallies forth into the stream again. Successfully she repeats the operation.

A grizzly bear, as a matter of fact a quintet of grizzly bears . . . . one by one the whole five of them, are motivated perhaps by curiosity to line up in front of a photographer. He is all set up, with camera on tripod, waiting for them. He has seen them at a distance, and has made preparations against the rather remote possibility there should be opportunity to grab a distant shot, when suddenly the quintet with military precision right-angles in his direction.

As the bears come within photographic range the camera turns—and continues to turn. Grimly the photographer ponders his course of action. The bears continue to advance until they are a scant thirty-five feet away. The camera still continues to turn, but the cameraman's predicament is unsolved.

True, there is a rifle in his impedimenta, but it is not by his hand. If it had been it would have been used only as a last resort. When the tense situation looks darkest, the larger grizzly, apparently the leader, resolves the cameraman's difficulties when he abruptly turns and followed by the others retires from the scene. The bears appear to be satisfied with their inspection. Certainly our cameraman is! For him although it has been a short it has been a rough experience. But he has it all on the film.

The foregoing events are but bits in a screened record of 1900 feet of Kodachrome film shown to the highly entertained Hollywood Women's Club on October 27 by Mr. and Mrs. Alfred Milotte. The latter was at the projector, while the former lectured as the scenes were revealed on the screen.

For five years the Milottes had conducted a photographer's shop in Ketchikan, Alaska. The increasing interest in the proposed—now in operation—Alaskan International Highway, or the present Alcan Highway, caused them to fulfill a strong desire which for a long time had haunted them:

To take a trip of undetermined but necessary length to record on film the country through which such a highway would pass, to show the country that in time to come—not so far removed, perhaps—that would be sought out by uncounted millions for a permanent home.

Accordingly the photographic establishment was disposed of and the Milottes took to the wilds. For photographic equipment they packed a Bell & Howell 121, a Cine-Kodak Special and two Leicas. For lenses there were a 6-inch telephoto, a 2½-inch, a wide angle and a standard 1-inch. With the Leica they used a 35mm., a 50mm., and a 105mm. lens.

The pictures resulting from the trip were exposed in the course of two years of time, in all seasons. The travelers were naturally deprived of the services of a darkroom on the trail, and learned to do their loading at the end of the day in the semi-darkness when possible.

Early they learned the advantages of having three rather than two persons in a party. These were due to the added work thrown on two persons at the end of the day, with the horses requiring care and the necessities of securing firewood and making camp. Many things can't be well done after darkness sets in.

"One occasion there was work to be done, work that could not wait, and there was a rare sunset, which as everyone well knows, also would not wait," remarked Mrs. Milotte. "At another time we were on the trail of some moose which we were anxious to grab while daylight remained and we were afraid they would get a scent of the horses and we would lose everything."

The speaker told of the trouble frequently encountered in extremely cold weather, when they were forced to slow down on camera speed. "And please remember," she added, "that when you get away from the seashore the thermometer does go low in Alaska. I think it will

Mrs. Grizzly goes fishing! (Photo Joseph Yolo.)

Mr. and Mrs. Milotte and the Cine-Special. On opposite page, Mr. Milotte in winter woollens and whiskers.

be agreed that 50 degrees below is not unusual in many places.

"Then again when you want a picture you don't always have time to bring Eastman heat pads into use It has been our experience, too, that the proper time to get a picture is when it is presented to you. We have passed up many shots —to our sorrow—because we thought we could get them some other time. But those we banked on to get at another time never showed up."

For practically a year now Mr. Milotte has been employed at the plant of the North American Aircraft Company. As a matter of fact it was just following Pearl Harbor his service began. His work there is as visual aid coordinator in the education section. Induction slide-films and teaching motion pictures are prepared under this supervision. His 35mm. color slide-films have been adopted by the Los Angeles visual education department. Strip films in color, with the participation lesson plan, are being developed from this material.

Mr. Milotte's experience in this field has been well rounded. Many of his Alaskan pictorial studies have been hung in national salons. His preparation for the work included study of art at the University of Washington, Cornish Art School, Chicago Art Institute and the Chicago Academy of Fine Arts.

One of the important objects in the Milottes' plans for their trip was to secure substantially complete and representative pictures of animal life in Alaska. They aimed not to record them chronologically, so to speak, covering the country as it might be revealed to them in the course of their travels. Rather it was to group them so far as practical.

Among the animal pictures they went after and secured were marmot (whistling), caribou, wolf, mountain sheep, grizzly bear, black bear, deer, moose, fox and ground and tree squirrel. Of birds there were swallow, ptarmigan, wheat-erer, arctic tern, jaeger and duck.

Mr. Milotte so far as known is the first official tourist to be given permission in Alaska to carry a gun. It may be said in explanation that permits to enter the country are issued to two divisions of activity: to hunter and to tourist. To the hunter as a matter of course it may be said permission is given to carry arms, but he cannot take a camera. To a tourist goes permission to carry a camera. In Mr. Milotte's case the particular government authority insisted for his own protection he carry a weapon.

Also it was their policy to keep in front of them two things. First and principally, the main object should be entertainment. Second, it should be to obtain a general, a representative, view of the country as a whole, rather than merely to follow the line of the highway.

For instance, early it dawned on them that sunsets, superb, gorgeous sunsets such as perhaps only may be obtained in Alaska, could be had literally by the barrel. They realized they were faced with the problem of overdoing them.

As an example of the "crowded" condition of the country they noted at one stage of their travels that in ten consecutive days there was but one of these on which they encountered a human being. The fifth day was remembered as the outstanding one on which they met an Indian.

In the course of the entire trip, a matter of perhaps 1600 miles in all, about 400 miles were by horseback, although other means of transportation were by truck, dog-team, and in one case in crossing a river in a rubber kyak. This craft was 17½ feet in length, and as a means of going places rates high in the estimation of the Milottes.

A total of 5000 feet of film was exposed by the tourists. It came sealed in cans and was checked in at customs. Likewise, it had to be accounted for in checking out. Consequently it was decided to check out at Ketchikan, as its destination was Rochester. That avoided dealing with any country other than the United States.

Mr. Milotte was asked if he had any suggestion for those who might contemplate a trip to Alaska in the days to come.

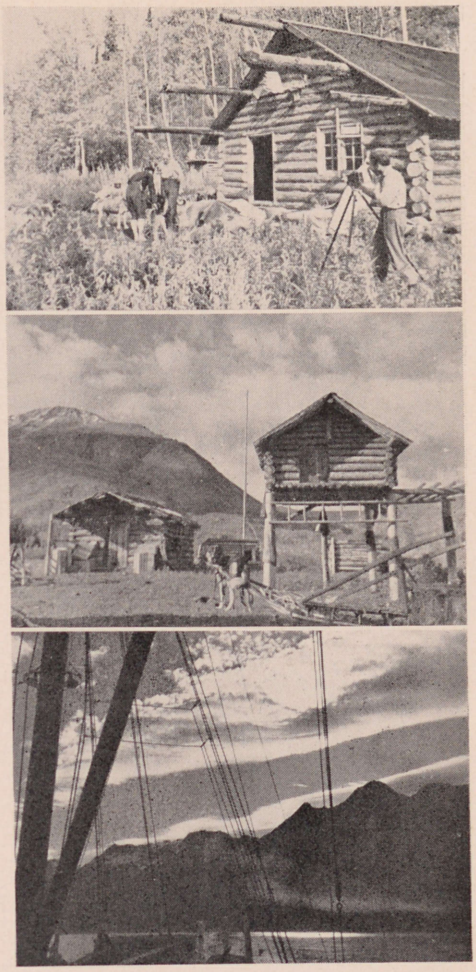
"Yes," he replied. "Perhaps I have. In the matter of clothes, don't carry old clothes. You know it is natural perhaps for one to take along a lot of old duds—duds that have seen their best wear. But you must remember you are going to be out of touch with civilization, and you can't buy what you want when you want it. Take plenty of woolen stockings and warm woolen clothing, because if you are wise you will wear all wool.

"You may not realize it, but Alaska has real precipitation—from 150 to 190 inches annually. In Los Angeles we are not doing so badly if we get 15 inches. We do, to be sure, get more at times, but that really is 'unusual.' Not all of Alaska's precipitation is wintertime snow, either; plenty of it comes down as rain to inhibit the camera-toting visitor. There are many places where you can expect it to rain some part of almost every day, and often continuously for days at a time."

Mr. Milotte was asked what he did with his tripod while en route from here to there. "Do you stow it on the pack animal?"

"Nay, nay," was the prompt response. "It is right over my shoulder. When I want it sometimes I may be in a hurry!"

Mr. Milotte was complimented on his shots of the big horned sheep, which had aroused much interest. "You might be surprised if I should tell you the time I spent in climbing over those rocky piles to get near them," he replied.



Top: Filming unloading of a dog-sled. Center: An Alaskan metropolis; the building on stilts is a cache for keeping food supplies from predatory beasts. Bottom: Alaskan sunsets are spectacular.

"Just one more bit," he added. "It has taken me seven years to acquire it, and of course I may be different from the average, but I'll give it to you anyway. If you are constituted as I am don't try to manage a movie camera and a still camera at the same time. Stick to one or the other. Paraphrasing the old English voter's slogan, 'One camera to one man.'

"We carry two Leicas, one for color and one for black-and-white. Mrs. Milotte is so strong a believer in the rule she will not carry more than one kind of Leica. When you are going after game shots you will find you can't bother with too many lenses; you don't have time to change them.

"Regarding fades, I have found it convenient to put in a lot of fades when the spirit moves—they may come in handy; if not, they can always be cut out. Another bit: I have been asked sometimes where I get that peculiar blue in some Alaskan pictures of sky. I don't get it. It's there. It always is following a rainstorm—and as I have said there is much precipitation in Alaska.

"With the opening of the Alcan High-

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Plan To Put Diversity And Life Into Your Films

By W. G. CAMPBELL BOSCO

WRITING a script for a home movie is, as we discussed in the last issue, a matter of planning, in more or less detail, what is to be filmed and how. The "what" is determined by the subject of the picture but the "how" is, within certain limits, the responsibility of the cameraman. And this quite apart from whether the photography is adequate or even good from a purely elementary, functional viewpoint.

A motion picture is a story told through a pictorial medium. The pictures, or scenes, that are parts of the film as a whole should each have the eye-arresting appeal that marks the work of the graphic artist, plus the interpretive quality necessary to sustain interest at a maximum and unfold the story expertly. And that's where the script comes in. By planning even the most seemingly unimportant inserts, due consideration can be given to the emphasis they will put in the sequence as a whole; emphasis pictorially or dramatically.

To take a clinical case let us suppose that a story calls for a scene which shows a man climbing a flight of stairs. We want to get over the fact that the man is being most cautious not to be heard. We also want to get over the fact that the stairs creak.

When the script is written it is decided that the scene is necessary because (a) it provides proper continuity between the previous and succeeding action, and (b) it is necessary to "plant," or emphasize, the squeaking stair for proper motivation in the next sequence. It is also realized, however, that the scene is of secondary importance to the story and that the opportunity for action or "business" is limited, to the extent that the interest might lag if the scene is not handled with due consideration for picture value in the filming and timing in the editing.

The problem can be resolved by: 1. Medium-shot. Man enters scene, takes off shoes and starts up stairs. 2. Close-up, through bannisters in foreground, of stockinged feet cautiously treading stairs. Foot is placed on stair as though trying it, and then withdrawn, then replaced again. 3. Close-up of man's face registering apprehension. 4. Medium long-shot looking down stairs. Man comes up to and past camera.

Thus, what might have been a dull or uninteresting sequence becomes an opportunity for some appealing angle shots which help "sell" the picture; emphasis is placed where it is needed and when the film is edited it will be possible to cut this sequence so that there will be a sufficient variety of shots to eliminate the possibility of "interest drag."

Another great advantage that the cineamateur will discover when he undertakes to prepare a script before he starts to shoot is the greater opportunity he will have for using his versatility as a cameraman. As a consequence his pictures as a whole will possess more photographic variety and charm as well as added lucidity and punch in telling their stories. By doing no more, for instance, than to plan the use of varying angles at which to shoot certain scenes will, quite often, lift a reel out of the ordinary.

It is sometimes surprising how easy it is to be monotonous photographically. Scenes that from an action viewpoint have every reason to be stimulating frequently suffer because they have a photographic sameness as endless previous scenes. And in judging the interest-sustaining qualities of a given bit of action, the experience or opinion of a mere spectator is worthless. Things just don't react the same from the screen.

The best illustration of the right and wrong way to make an amateur film that ever came to my attention were some scenes shot of a certain rodeo. Unknown to each other two camera enthusiasts had turned out to get the event on film. Both men got almost exactly the same material. Both reels were photographically excellent as far as exposures and camera handling was concerned. But there the similarity ended.

One man turned in something that

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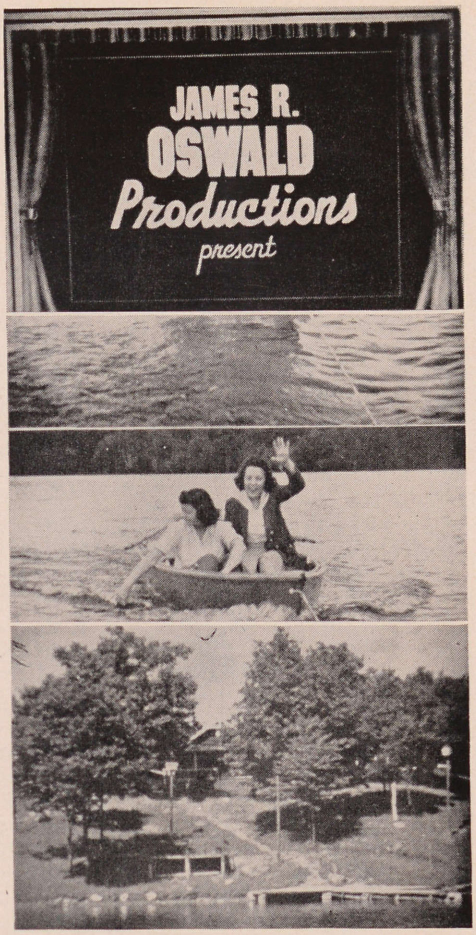
Are You Getting the Most Out of Your Movies?

By JAMES R. OSWALD



GOOD AND BAD PRESENTATION: Top, a dignified main title like this gets a film off to a good start. Center, an out-of-frame picture is confusing—and irritates the audience. Bottom, watch for fuzz in the projector aperture!

YOU'D be surprised how neglected one of the most important phases of moviemaking really is! Even the supposedly "particular" film-makers often manage to overlook it. After sparing no effort to make a film technically perfect in every respect, they are content to exhibit it to an audience on the most slipshod manner imaginable. In shooting, editing and titling their films, perfection itself may not be quite good enough to please them. But in projection, they seem to have that "anything goes" attitude.

Does *your* audience have to sit and twiddle its thumbs while you search through scores of boxes or tins for that reel of your week-end outing or North Woods vacation last summer? Again while you rewind films and clean the fuzz from the projector gate? Projection may sound like a very insignificant detail to many people, but after all, one's photographic achievements are judged solely by the way the picture appears to the audience on the screen. A little foresight and ingenuity on the part of the projectionist can do much to win this audience appeal.

It is not difficult to acquire a system of short-cuts which will tend to make your program more entertaining. Have the equipment set up before the arrival of your guests, whether a small gathering of friends at home or a large auditorium assembly. The projector, of course, should be on a solid table or stand and your first film properly threaded and focused on the screen before the audience arrives.

A sure sign of carelessness or neglect is that distracting fringe of fuzz which is seen so frequently around the edges of the picture. Prevent this by making sure the lens and gate are spotlessly clean. And it might be well to mention here that it is good practice, too, to carry a spare projection bulb at all times. I once had one burn out, much to my embarrassment, at the very beginning of my program. As I had no spare, that fleeting glimpse of the main title also ended the program!

Now a word about room lights. If you have no means of fading them gradually (the ideal method) an alternative is suggested which is the next-best thing. Illuminate the room with reading lamps or some other form of indirect illumination instead of conventional overhead lighting, and extinguish the lights one at a time, preferably from a central control point.

The projectionist should always keep a constant watch on the screen while the show is going on. Occasionally, though not very often, the picture may get "out of frame." That is, a portion of two successive frames on the film are visible on the screen at the same time, as is the dividing line between them. When this occurs adjust the framing device on your projector immediately. Don't wait until the reel is half completed!

This is particularly likely to happen with 16mm. film shot with some magazine-type cameras, where scenes from different magazines (or cameras) are intercut. It is likely to happen in 8mm., too, where scenes shot with different cameras are intercut, or follow each other successively.

Focus is another important projection-problem. Due to differences in the thickness of the film, there is a noticeable difference in focus for black-and-white film and for color. It's most evident in 8mm., but recurrent enough in 16mm., too, unless the projectionist is on his toes. Often—even in black-and-white—there will be a noticeable focus difference between scenes shot on different *kinds* of film, or even on different batches of the same type of film, for new film, fresh from the processing laboratory, naturally contains more moisture, and is thicker, than older film which has been slowly drying out in the can.

Another point that cannot be emphasized too strongly is the continuity angle. Just as there is continuity in filming movies and in editing them, so also there is continuity in projecting them. You want your program to build to a climax in entertainment and in technical quality, for one thing. So begin, if you can, by projecting your "weakest" pictures, and build up to the strongest and technically best ones. As a rule (of course there are exceptions!) it's probably best to start your program with any black-and-white pictures you may want to show, and then go to the Kodachrome ones, because unless a black-and-white picture is uncommonly fine, there is nearly always a sort of let-down feeling—an impression of something missing—if you follow color with black-and-white.

For the same reason, do not stop to rewind each film as soon as it is concluded. The show should progress smoothly at all times, with a minimum of interruptions. Rewinding can well wait until after the guests depart. If a separate rewinding unit is available, of course, one reel may be rewound while another is being projected.

In conclusion, it is well to bear in mind that your pictures should always aim to provide the utmost in entertainment. The nearer the projectionist comes to obtaining this objective, the greater the satisfaction both he and the audience will experience. Though the professional touch may be unavoidably lacking because of limited equipment, at least an approach to this perfection can be made. And make no mistake about it, your audience appreciates it.

Remember, your movie making doesn't end when the films are returned from the processing laboratory! END.

STORY IDEAS FOR CHRISTMAS MOVIES

By J. DICKINSON REED

CHRISTMAS movies are going to mean more to all of us this year than ever before. And with the growing scarcity of film, we'll probably show our Yuletide movies around more, even if we're the sort of filmers who ordinarily keep family films strictly reserved for family audiences.

So why not make this year's Christmas movies more than an ordinary, unembellished record of what happened on the holiday? Why not add enough of a thread of story so that your 1942 Christmas movie will be lastingly entertaining, not only to family groups, but to *any* audience, anywhere?

The story doesn't have to be a complex affair of plot and counterplot; quite the reverse, in fact; the simpler it is, the better, so long as it manages to strike what the critics like to call "the human touch." Just make it a simple, believeable little story of Christmas in your home—based partly on what actually *did* happen (shot candid-camera fashion while actually taking place) and partly on staged enactments of things which *might* happen, and which give your picture a smooth beginning and ending, and keep the thread of continuity going through it.

In most families, the natural starting-point for planning any Christmas movie will be the children. If you can begin by establishing their thrilled anticipation of the Holiday and Santa's visit, then show their actual enjoyment of the day itself, and end with a little sequence showing them trooping off to bed—sleepy but supremely happy—you'll have a picture that's a sure-fire hit with any audience.

Two of the best Christmas movies ever made used variations of this theme. They were "Santa Visits Elaine," made by John E. Pohl, of Cicero, Illinois, and "Another Happy Day," made by T. Lawrenson, of Dundee, Scotland. Each of them captured first honors in the Home Movie division of one of THE AMERICAN CINEMATOGRAPHER'S International Amateur Movie Contests. And each can suggest usable story-ideas for almost anyone's Christmas movie.

"Santa Visits Elaine" is based on the premise of "be a good child and Santa will bring you ————." At the start, we see Elaine's mama reading her "The Night Before Christmas," and telling her about the rewards of pre-Christmas virtue. In the next sequence, we see Elaine diligently practicing those juvenile virtues—"helping mama," sweeping, ironing, washing dishes, putting her toys away, and so on.

This leads up to the night before Christmas—and Santa's visit, embellished with some simple camera tricks which make the sequence doubly effective. Santa appears magically in the fireplace. Then, with a wave of his arms, he clears away the furniture from one corner of the room. Another wave, and the presents magically appear and start arranging themselves. Finally, after partaking of the repast Elaine has thoughtfully set out for him, Santa retires to the fireplace and magically disappears.

This camera-magic is the simple kind which can be done by anyone who has both a camera and a tripod. The secret of it is simply that at the moment anything is to vanish or appear, the camera is stopped, the object removed or put into the scene as the case may be, and the camera re-started. Where, as in some scenes, Santa, too, is in the picture, he 'freezes' in position during the time the camera is stopped, and continues his movement as soon as the camera again starts turning.

With this embellishment, the rest of the picture shows in candid-camera fashion just how Elaine—who is a very real little girl—reacted to her presents. And for an ending, she is shown at last toddling slowly upstairs to bed.

Lawrenson's picture uses another variation of this same general theme. Opening as the postman delivers a Christmas-card to young Ian, we soon see Ian (with the help of his mother) laboriously inditing a letter to Father Christmas, reporting he has been a very good boy, and asking for a nice train.

When Ian goes to bed on Christmas eve, we see that the family follows suit, as evidenced by close-ups of such details as latching the door, winding the clock, and so on. Close-ups of the clock's dial show time passing . . . and again we see Santa emerge from the fireplace, and start distributing toys. A touch of humor is added when the cuckoo clock strikes the hour, and startled Santa overturns the fire-irons. Father, hearing the clatter, wakes, looks around and, seeing nothing unusual, goes back to sleep, while Santa finishes his task and returns up the chimney.

In the morning, we see Ian's reaction to his Christmas gifts—centering, of course, on the train, with which both he and his Daddy play delightedly. Lawrenson, like many another, found that toy train an irresistible temptation photographically. While Ian plays with it, his father plays with camera and lights building up a sequence of remarkably effective camera-angles on both the train and its youthful engineer.

A few shots show the father at length continuing to play with the train while its ostensible owner settles in a corner with a book! This, of course, is a familiar situation in almost any home where Santa has delivered a Christmas train, and one always good for cinematic comedy. It can be developed to almost any extent, and is always a sure-fire laugh.

Lawrenson's picture continues to carry young Ian through his happy day . . . dinner (including plum pudding)—making a snow-man in the front yard, with Daddy's help—tea—and finally the fireworks which are a part of the British Christmas, even as they are in some of our own Southern States. And so, protesting but happy, to bed.

Both of these pictures, it will be seen, were made into interesting little stories by adding to the straightforward record of things which actually happened on Christmas a few introductory, connecting and closing scenes which, while they could have been (and probably were) shot at some other time, might have happened on that particular Christmas and so make the film complete. We've shown these pictures before many an audience —none of which knew Elaine or Ian— and never have we found an audience that didn't pronounce them a hit.

There's no copyright on the idea of making a Christmas movie after these patterns. Of course, you'll have to adapt the basic idea to fit your own family pattern, and your own preferences as a filmer. Lawrenson, for instance, stressed close-ups of his youngster, who can register anticipation and delight better than many a professional actor; Pohl stressed the camera-trickery. You may find some other point to stress in your picture—perhaps the presence of a father, uncle or big brother on leave from the Army, or the timely business of having a happy Christmas in spite of rationing, shortages and dim-outs. But if you make this year's Christmas epic a simple little story as well as a family record, you'll find you have a picture which brings enjoyment not only to the family, but to outside audiences as well. END.

AMONG THE MOVIE CLUBS

WITH gasoline rationing coming on in previously unrationed parts of the country, and rationing or restrictions on film, lamps and other moviemaking necessities, we've heard that some clubs are considering disbanding "for duration." As we see it, there's no need of that. Of course filming opportunities are going to be restricted by wartime curtailments—but there will be no restrictions on a Club's opportunities for service and fellowship. Indeed, the amateur movie-maker has a priceless opportunity to serve his country and his community today, and he can emerge from this war a more useful citizen than he has bothered to be before. Some clubs, like the Long Beach Cinema Club, have been making Civil Defense films for their communities, and using their films and projectors for entertaining isolated Army posts. Others, like the Syracuse Movie Makers, have taken over the major job of providing entertainment for a big Army camp. These may seem to be exceptional circumstances: but every club, anywhere, will find opportunities—constructive projects to keep their members together and active in a useful way—if they'll only look for them! The Editor.

8-16's Elect

Annual election of the Philadelphia 8-16 Movie Club put William Bornmann into the President's chair, with George Burnwood as Vice President, and Philip Oetzel re-elected Treasurer. A tie in the voting for Secretary resulted in a run-off vote in which John Henrick won over Mrs. Helen Bornmann. Ben Chesler, Leonard Bauer, Jr., and Walter Bracken were elected directors.

Screen fare included some spectacular Kodachrome films by Vernon Lunt of the Utah Cine Arts Club; 400 feet of 8mm. rodeo shots sent by O. Walter Prioi, of Everett, Washington, and a demonstration of the Macbeth illuminometer.

LEON MERROW.

"Rockies" in Washington

The November meeting of the Washington Society of Amateur Cinematographers was treated to a special Kodachrome production "Right-time in the Rockies" by William Knepel, and a talk on lights and lighting, together with the usual question-and-answer session.

JOHN T. CHEDESTER,
President.

L. A. 8's Elect

The November meeting of the Los Angeles 8mm. Club was featured by the election of officers for 1943. Chosen for President was Fred Evans, with Irwin Dietz as Vice-President, Mrs. Louise Arbogast as Secretary, and Adolf Apel as Treasurer.

Films for Exchange

"All These We Defend," documentary, 400 ft., 16mm. silent, black-and-White, made by Arthur Tucker. This film portrays the Bill of Rights and the Constitution, what they stand for, and their defense in the present war. Lap-dissolves, animations and stock-shots from newsreels are used to make the film thoroughly modern in technique and treatment.

"Finger Lakes," travelogue, 400 ft., 16mm., silent, black-and-white and Kodachrome, made by Arthur Tucker. Excellent photography shows the scenic beauty of the Central New York Finger Lakes district.

"Fish Hatchery," documentary, 400 ft., 16mm., black-and-white, silent, made by Leo Cullen. Shows the netting, stripping, artificial fertilization and hatching of carp. For general showing as well as to audiences interested in fish and game conservation.

"The Toothache" and **"Movie Magic,"** two 16mm. black-and-white comedy featurettes mounted together on 400-ft. reel. Illustrate the uses of stop-motion, reverse-motion, and similar simple tricks which can be done with any amateur camera.

The above films are available through the Syracuse Movie Makers' Association, Lisle D. Conway, President, 100 Trinity Place, Syracuse, N. Y. An 8mm. list is in preparation.

"Indianapolis Amateur Cine Club—1942," 50 ft., 16mm. sound-on-film. This film is a cleverly-made introduction to the officers and members of the club, intended specifically for circulation among other clubs, to give cinefilmers in other parts of the country a chance to "meet" their fellow-amateurs in Indianapolis. It's short, but well done and well worth seeing. Available from E. M. Culbertson, 2039 Ruckle St., Indianapolis, Indiana.

Travel, Titles for MMPC

New York's Metropolitan Motion Picture Club initiated a series of general discussions of movie problems at the Club's November Meeting. Program Chairman Joseph Hollywood screened a short 8mm. film on "Titling for the Eight," and led the discussion that followed. Screen fare included Ernest Miller's "A Day at the Fair" (16mm. Kodachrome); "Vieille France," by Luc Pauvel; "Autumn's Glory," by Leo Heffernan, and "Do It Again Harry," by Herman Bartel.

FRANK E. GUNNELL.

Sound in Minneapolis

The November meeting of the Minneapolis Cine Club included a talk on continuity by Ray Rieschl, and two films by Carroll Davidson, "The Old Mill Stream" and "Musical Moods," illustrating his specialty of synchronizing home movies and records.

ROME A. RIEBETH.

Skiing in Los Angeles

The November meeting of the Los Angeles Cinema Club presented a spectacular film by new-member E. E. Olsen, "Skiing in the West." Also shown were two 16mm. sound-films, "Meat and Romance," from the National Livestock and Meat Board, and "For America We Save," from Firestone, dealing respectively with nutrition and tire-conservation. Ace-projectionist Harry Parker projected a series of Kodaslides exposed by Mrs. Mildred Zimmerman.

A. A. ANDERSON,
President.

New Home for Philly

The October meeting found the Philadelphia Cinema Club assembled in Westminster Hall, the Club's new home in the Witherspoon Building. Ideally suited to the needs of a movie group, the room is long, with acoustic tile ceiling and a built-in screen.

The guest speaker of the evening was C. G. Bastier who told of his travels and experiences as a professional cinematographer.

Charles James projected his delightful Kodachrome film "In the Vineyard." Picturing Martha's Vineyard as an alluring summer resort, his impressionistic sequences of shadows, doorways, movements of wind and water, serve to weave these scenes into a meaningful unity.

An excellent picturization of the Grand Tetons was shown in a film by our president George Pittman. A well-planned sequence of a travelling car with shots taken from vantage points along the road and through the windshield transports us from one breath-taking view to another. Appropriate musical background augments the entertainment value of this fine film "Over Western Trails."

R. M. Hoot, an ex-officio of the club, seems to have turned professional by showing a film made by him for the DuPont and Philadelphia Electric Companies. This film—"Salvaging Waste Light for Victory"—is a sound-on-film Kodachrome, post-recorded. It shows the highlighting of vital parts of machinery with various-hued paints. This, in combination with proper lighting, increases visibility and production.

FRANCIS M. HIRST,
Publicity Officer.

Camera Car

(Continued from Page 514)

fication for acceleration, for instance, was that in intermediate gear it should be able to accelerate from a standing start to a speed of 45 miles per hour within a distance of 500 feet. In practice the car, starting and remaining in *third* gear (next to high in the 4-speed transmission), has proven capable of reaching a speed of 58 miles per hour within 500 feet, and 64 miles per hour in 600 feet. Starting in high gear, a speed of 50 miles an hour was reached at 500 feet, 65 miles per hour at 600 feet, and 80 miles per hour in 900 feet. This ability to start smoothly in a high gear and accelerate rapidly is important, as even the best gear-shifting in any car will produce a momentary change of speed which is detrimental to really satisfactory picture quality.

As an example of riding quality, obtained by the wide front wheel tread and the pivoted spring mounting of the tandem rear axles, a typical 50-foot Los Angeles street with a high center crown and deep side gutter dips was crossed at a speed of 40 miles per hour. There was only a slightly perceptible tendency to rebound over the gutter and crown of the road. A standard 5-passenger car following the camera truck rebounded so violently that the car went almost out of control.

In addition to this sensationally improved performance, the car has many refinements from the strictly photographic viewpoint. A roomy locker behind the cab provides locker-space for carrying three complete motion picture camera outfits and a complete still-camera outfit, with all necessary accessories.

Instead of powering the cameras from batteries carried in the usual battery cases placed on the floors of the camera-platforms, the cameras on this car are powered from batteries built into the truck body and wired to convenient outlet plugs at the front, rear, top and sides of the car.

Low camera-platforms are provided at the front and rear of the truck, an intermediate-level platform deck is available just above the rear wheels, and a high-level position is available atop the cab. Rigid, tubular steel camera-mounts are provided on the front and rear platforms and the rear deck. These mounts, to which any type of standard pan-and-tilt head may be fitted, are extensible and adjustable for leveling off the cameras. As will be seen from the illustrations, either direct or offset heads are provided. The mounts slide from side to side of the platform or deck between metal rails, and are locked into place with special quick-release tie-down locks. While six mounts are normally provided, in emergencies as many as a dozen or more cameras have been mounted on the truck.

Removable safety guard-rails for these various platforms are provided, and carried inside the cab when not in use. Auxiliary mounts are also provided for microphone booms or booster lights, and provision is made for fitting auxiliary platforms at either side, if necessary, or fitting two-bars behind or in front of the car or on either side. END.

Miniature Fires

(Continued from Page 521)

plenty of ordinary roofing or paving tar inside your miniature, where it will catch when your gasoline-kerosene spray starts. It will help, too, in getting the wickedly lazy action of a fuel-oil fire if you build your miniature to a rather large scale.

Recently I had to do a shot like this, showing the "scorched earth" dynamiting of an oil field in the orient as the Japs approached. We built our oil tanks surrounded by a ring of raised earth representing the sump that surrounds real oil-storage tanks. But inside, instead of having the bottom of the tank flat on the ground, we raised it a few inches on stilts which, of course, the camera couldn't see, as they were hidden behind an earth embankment. Inside, on a bottom of wire mesh, we put excelsior and waste, impregnated with tar and well doused with the gas-kerosene mixture. This combination gave us a perfect fire, with plenty of smoke; and as the open bottom of the tank was a few inches above the ground, the fire "drew" perfectly.

One of the tanks had to be dynamited and turned over, apparently spilling its contents into the bay, which caught with a sheet of floating flame. We prepared for this by pouring a generous supply of the gasoline-coaloil mixture onto the surface of the water. Being lighter than water, of course it floated. And how it *did* burn! We did that scene on one of our biggest stages —and though the roof is more than 40 feet above the floor, the roof-beams were charred and blackened by the time the scene was in the bag!

The amateur, by the way, has one decided advantage over the professional in filming miniature fires: he *has* to film them outdoors, by sunlight. Working, as we professionals often have to do, indoors on a stage, with artificial illumination, we have a really nasty problem in balancing our light so that the flames don't overpower the illumination on the rest of the scene. This wouldn't be so hard at normal speeds —but when you get to lighting for speeds running from 180 to 200 frames per second, it becomes quite a problem! Working outdoors, with sunlight, the amateur will get a pretty natural balance, even when he filters down for night-effects. END.

Explosions

(Continued from Page 511)

grenade, he was to spill off his motorcycle at a certain spot. That spot was about two feet to one side of the place my explosion would take place; on the ground, two feet from the blast, he'd be perfectly safe, for the charge was planted so it would shoot up over him. Actually, a man standing six feet away would be in more danger than a man on the ground two feet from the blast!

But this young chap wanted to put on a good show for us. As the other player heaved his grenade I gasped, for our motorcyclist was heading right over the spot where my charge was planted! I managed to delay firing until the motorbike had almost passed the spot; but the blast caught the cycle's rear wheel. The explosion tossed our over-zealous young actor twelve feet into the air and removed his pants very neatly. Luckily, he came down otherwise intact; but he might not have. If he'd followed directions, we'd have gotten just as thrilling a shot, and everyone would have been safe.

That's where studio-wise professional stunt men are invaluable. Through long years of experience, they know almost as well as we do what a given explosion will do. They know when it is safe to stand erect beside a blast and take time to "die" dramatically, and when it is best to crumple quickly to the ground. Best of all, they can take direction. You know what your explosion will do: and if you know you can trust your actors to do their part with equal precision, you can make really spectacular shots in perfect safety. With inexperienced actors, such as you often have in training films, the old diplomat's caution of "No zeal" is the best guide, for a man on the ground, even though he is close to a blast, is safe. And he looks just as dead on the screen, even though he's timed his fall a split second before the explosion, rather than waiting for it to push him down! END.

Planning for Diversity

(Continued from Page 524)

was tedious to sit through and failed in every way to convey the excitement and drama of the rodeo or do justice to the subject-matter. He shot everything from a monotonous eye-level with the result that all the vitality of his subject was strained out. When he edited the film he hadn't a chance. And even the technically excellent follow-shots he made with his telephoto lens hardly helped to dispel the sense of sameness that pervaded scene after scene.

The other man opened with the same parade and filmed the same events. But with what amazingly different results! First, he filmed general rodeo atmosphere stuff. Then, instead of filming entry after entry in the same events, he took time out to think up a few ideas and made some notes. In effect he wrote a script. Simple and unassuming, but sufficient for the purpose.

Reviewing the list of scenes he had

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already made, and cutting the film in his mind's eye, he made a list of shots he would take. And they were the scenes that made the picture, that lifted it out of the class of stuff that the average cineamateur makes and turned what might have been just another photographic record of a sporting event to a short-subject that would have been a welcome addition to any theatrical program.

He made shots of small boys standing in open-mouthed admiration; he made another memorable shot of a rather sedate woman trying to catch in her mouth the dripping mustard from a hot-dog; another of spectators in a whole block of seats on their feet, tense with excitement.

Lucky? Yes . . . in a way: he wasn't looking for just those shots but he *was* looking for characteristic atmosphere and crowd shots—and he got them. Then there were close-ups of a bronc's head tugging against the restraining hands behind the gate, of pawing hoofs; of steers and lariats. The cowboys sitting on the corral fence got their footage, too, in both long-shot and close-ups. So did the silver-mounted saddles for which they were competing.

These shots I speak of were taken with every consideration for pictorial value and photographic variety. There were shots framed by heads and Stetsons and corral railings. There were birds-eye shots and worm's-eye shots. The cameraman must have made an awful nuisance of himself—but I suppose he took advantage of the tolerance people have for kids and camera addicts.

When this man edited his film he had plenty to work with. The brief parade sequence that opened the epic was enlived with cuts of kids and crowds. When action sequences weren't filmed sufficiently well in their entirety or when the action was too short or too long, he had interesting, atmospheric cuts to fall back upon. Nothing new, or original? Certainly not! Only a splendid example of tried and true methods and formulae used to make a picture more entertaining. And movies—whether professional or amateur—will always "pay off" on the amount of entertainment they offer their audiences! END.

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Charlie Lang

(Continued from Page 516)

picture was an unimportant little thing called 'Ritzy,' starring Betty Bronson. The less said about that picture, the better! I got through it somehow, but not in any fashion to distinguish myself or make the producer happy.

"I went back to Second Camera—and liked it!

"Two or three years later, they gave me another break as First Cameraman. This time I did better—but not too much better. I'd learned a good deal shooting second with some of Paramount's older and more experienced hands, but I still didn't cover myself with glory on the screen. I got by—but by a margin that got slimmer and slimmer all the time.

"Finally I reached a point where I knew that if I didn't do better on my next picture, I'd better get ready to go back to shooting second, or dig out the law books. And I tried to analyze my past work to see if I couldn't find out what was lacking.

"Finally I reached the conclusion that, consciously or otherwise, I'd been imitating what I saw the other cameramen doing too much. I'd approach a scene and try to light it the way I thought Harry Fischbeck or Al Gilks or Vic Milner would do it. Naturally, what I was putting on the screen was a pretty pale imitation of Fischbeck, or Gilks or Milner. It didn't have any real character of its own. And even in the 'B' pictures I was doing, it was a misfit.

"So on this picture—which I was pretty sure was likely to be my last—I decided to forget about what the other fellows might do, and try and photograph it for Charlie Lang. At least, I'd go out on my own mistakes, rather than on the mistakes I'd make trying to copy somebody else's good work!

"Luckily for me, that picture was a melodrama—one that could stand strong pictorial treatment, with 'arty' compositions and rugged effect-lightings. I gave it the works. Where before I would probably have hesitated, and tried to play things on the safe side, this time I went the whole hog on sketchy, dramatic lightings.

"And it clicked!

"Instead of being fired, I got a raise, and a chance at better pictures. I worked for a while with Dorothy Arzner, the celebrated woman director. In one of the pictures, I photographed Ruth Chatterton, who was then Paramount's top star. And she liked the way I made her look on the screen so much that on her

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next picture she asked for me. And when a studio's biggest box-office star asks for a cameraman, she usually gets him. I stayed with her until she left the studio.

"From that time on, things have rolled along fairly well for me. I've gotten my fair share of the studio's best photographic opportunities and, I hope, not done too badly by them. I've never been completely satisfied with any of my pictures, but other folks luckily haven't usually seen all the faults in them that I do.

"But the start of the whole thing was that decision to try and stand on my own feet, photographically, rather than to keep on safely imitating somebody else.

"I think that would be the keynote of any advice I'd give a younger cinematographer today. If my present Operative were to be promoted to a directorship of photography today, I'm sure I'd urge him not to pattern his work after mine a minute longer than was absolutely necessary in getting a good start on his own. After that, for pete's sake forget there ever was such a person as Charlie Lang: go out and shoot things as you yourself see them, not as you think Charlie Lang or Vic Milner or Joe Doakes would shoot them!

"And above all, if the story will possibly stand it, don't be afraid to go strongly for effect-lightings! They're a sure-fire winner of the average non-photographer's praise (you never saw any cinematographer miss on a mystery or horror picture, did you?) and while you may fail to satisfy yourself on some of the more conventional shots, in details only a cinematographer would notice, if you get in a good sprinkling of really striking effect-lightings and forceful compositions, you'll find the front office, the director and the stars are all likely to pat you on the back as a rising young artist!

"Once you're established that way, and off to a good start, you'll find time enough to take yourself in hand and smooth off those rough spots which only you, as a cameraman, can see. You'll never be completely satisfied, anyway, if you appraise your work with real sincerity. Even if they hand you an Academy 'Oscar' for a picture, you'll still be able to look back on that picture with a bit of a blush and tell yourself, 'Gee, I wish I could do that scene again—I could do it so much better now, I could avoid this mistake I made, or that opportunity I missed!'

"As a matter of fact, I find that looking back over some of my past pictures is helpful in more ways than one. A good look at yesterday's mistakes keeps you from feeling too self-satisfied, and it can often give you very helpful pointers on what to do today, too.

"When I start a picture, of course my first step is to study the script as carefully as possible, and try to visualize clearly what I see in each scene and sequence, and figure out in advance how to get it on the screen. Then, when I'm sure my mental picture and that of the director, the producer, and others coordinate, I start casting back in my memory for some other picture I've done in which I've used a similar treatment.

"When I find it, I get a print of that picture and study it on the screen. That way, I can see objectively just how that treatment worked out in practice. If I see something good—something that can be adapted to my new assignment—I know precisely what I did to get that effect, and what I must do to get it under today's conditions.

"And I also see the opportunities I missed before. If there's any parallel in the new picture, I at least have advance warning of them . . . a tip-off on what I should do, even if I didn't do it before. I'll probably make plenty of mistakes, and miss plenty of opportunities: but at least they'll be different ones!

"I've often thought it would be interesting to have an opportunity to re-do with today's materials and methods some picture I'd photographed in the past. Even in black-and-white, with today's advances in film and lighting, and particularly putting today's ideas in cinematographic treatment to work, it would give an entirely different result. And using Technicolor would be like playing a familiar piece with a symphony orchestra in place of a single, tinny piano—!

"And while speaking of advances, don't forget the changes that have taken place in the camera crew itself. Today's Operatives and Assistants are infinitely more important to the director of photography and to the picture than were the Second Cameramen and Assistants of yesterday. They used to be more or less cogs in a machine . . . and cogs you could do without, in a pinch. But today, the director of photography can stand or fall on the performance of his crew. Of course, he creates the lightings and plans the compositions: but if the Operative doesn't work in perfect coordination with him, they're not likely to reach the screen intact. If the Assistant doesn't do his work in following focus perfectly . . . well, nobody can tell about it until the rushes are screened the next day! And the blame falls more on the Chief's head than on the subordinate's. Perfect team-work is essential. The director of photography must have confidence that his operative crew has the ability to per-

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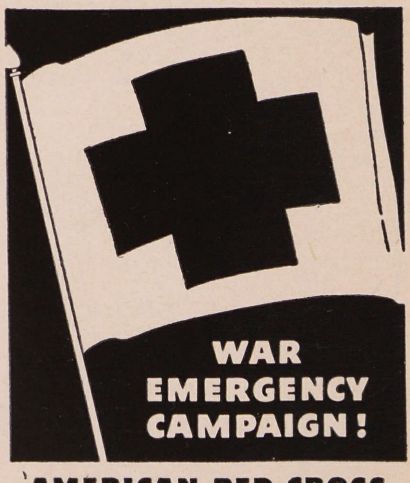

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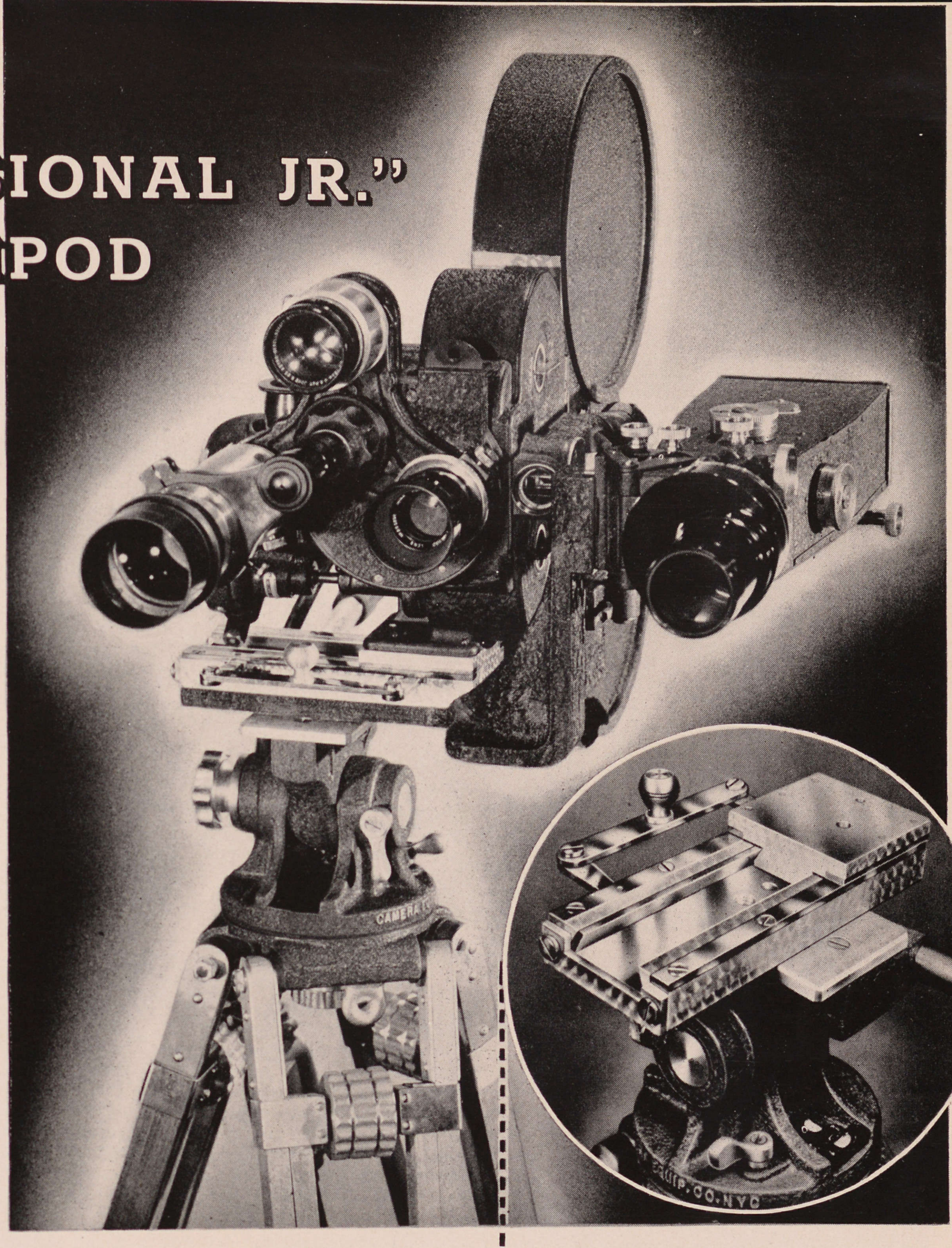
"PROFESSIONAL JR." TRIPOD



The B & H Eyemo camera shown here mounted on the "Professional Jr." Tripod and Shiftover has been especially adapted for aerial use by the Office of Strategic Services, Field Photographic Branch, Wash., D. C.

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★ The Shiftover has a "stop-bracket" which prevents the camera from sliding off the dovetail base — and is provided with dowel pins which position it to top-plates of tripods having 3/8 or 1/4-20 camera fastening screw.

form whatever is required, and the integrity to admit immediately if they've missed a shot. They, on their part, must have confidence that their chief won't ask the impossible, and that he'll back them up when they need it.

"That's why I've so little patience with some cinematographers who seem to feel they've got to be as arbitrary as a Prussian major with their crews. Of course some sort of discipline is often necessary if we're to get things done; but it should be the discipline that grows out of mutual respect and confidence—the sort that builds up democratic teamwork on the set in just the same way it does in the Army or on a sports team. And I think most of us, if we compare what our crews are doing with what we did when we were working as Second or Assistant cameramen, will have to respect them for doing a much more intricate job, under more difficult conditions—and probably doing it much better than we would have!" END.

Without Photofloods

(Continued from Page 520)

more directional light, and which of course can always be softened to any desired extent by placing diffusing screens over the lamp.

The standard Mazda lamps we've been talking about are available in *both* inside-frosted and clear globes; the projection lamps, of course, only in clear bulbs, and the "R-type" reflector spots and floods only with inside-frosted globes. By combining these lamps, with and without added diffusion, you'll find you can achieve a very much wider range of lighting effects than you ever could with the frosted Photofloods alone.

Where you want your lightings essentially soft—as in glamorizing women—you can use frosted-bulb lamps, supplemented, perhaps, with added diffusion.

But where you want more strength and character in your lightings—as in photographing men for virile effects—use undiffused, clear-bulb lamps, and you'll get stronger, more rugged lightings than ever before. You'll get more sharply-defined shadow effects, too, when you want them, for a clear-globed lamp gives a much more directional beam than is possible with any frosted globe.

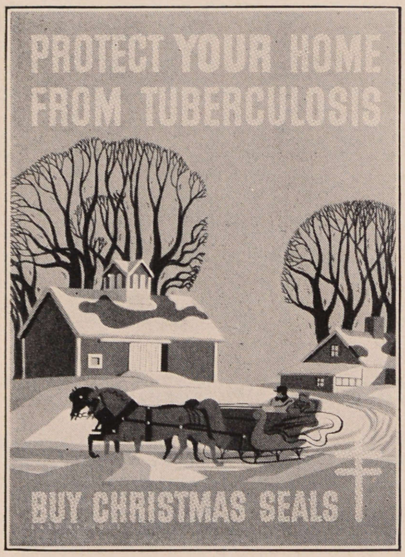
And when, as in most cases, you want to combine these effects, you can do so if you have both clear and frosted globes to put into your lighting units. You can use the clear-bulb lamps for strong key-lighting or for the highlight side of your lighting, and use the softer frosted-globe lamps to fill in the shadow sides. And you can illuminate the backgrounds with the "R-type" reflector lamps—especially the flood types—mounted in a simple socket on a wooden base, and concealed behind furniture, etc., to light up the back walls.

All told, while we'll all miss the Photoflood, we'll find we can manage adequately without it—and in the process learn things about balancing different types of light-sources which will stand us in good stead when the Photoflood is once more available! END.

America's Burma Road

(Continued from Page 523)

way things are going to happen in Alaska. From the Canadian border to Fairbanks is 1671 miles. This section is already in operation ahead of schedule. Secretary of War Stimson says supplies are moving north over the road to troops. When this war is won, thousands of camera-toting motorists are going to follow over the same route. Twenty or twenty-five years ago only the hardiest adventurers even thought of driving from our big cities to vacation in Yellowstone or the Grand Canyon; today it's a commonplace. Today, the thought of 'driving to Alaska' sounds adventurous and hints at hardships; tomorrow, a vacation drive up 'America's Burma Road' will be as much a commonplace as a drive to Yosemite—but it will take the picture-maker to a whole world of photographically virgin territory!" END.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Script Breakdowns

(Continued from Page 513)

training film producer's usual lack of Hollywood-trained aides.

Obviously, if the detailed information on all the requirements of each single scene is placed this way in standard form on a single sheet of paper, the scene forms can be re-grouped either as a card-index or in a loose-leaf binder, in whatever sequence will provide for the most efficient shooting. Without the necessity of thumbing through page after page of script (and usually finding, too late, that you've overlooked one scene!) all the scenes to be shot on a given set, or a given location, can be grouped together, planned together and filmed together. As each scene is successfully put on film, its accompanying scene form sheet, duly annotated, can be moved into another place in the file or binder, and so on until all that group of scenes are filmed.

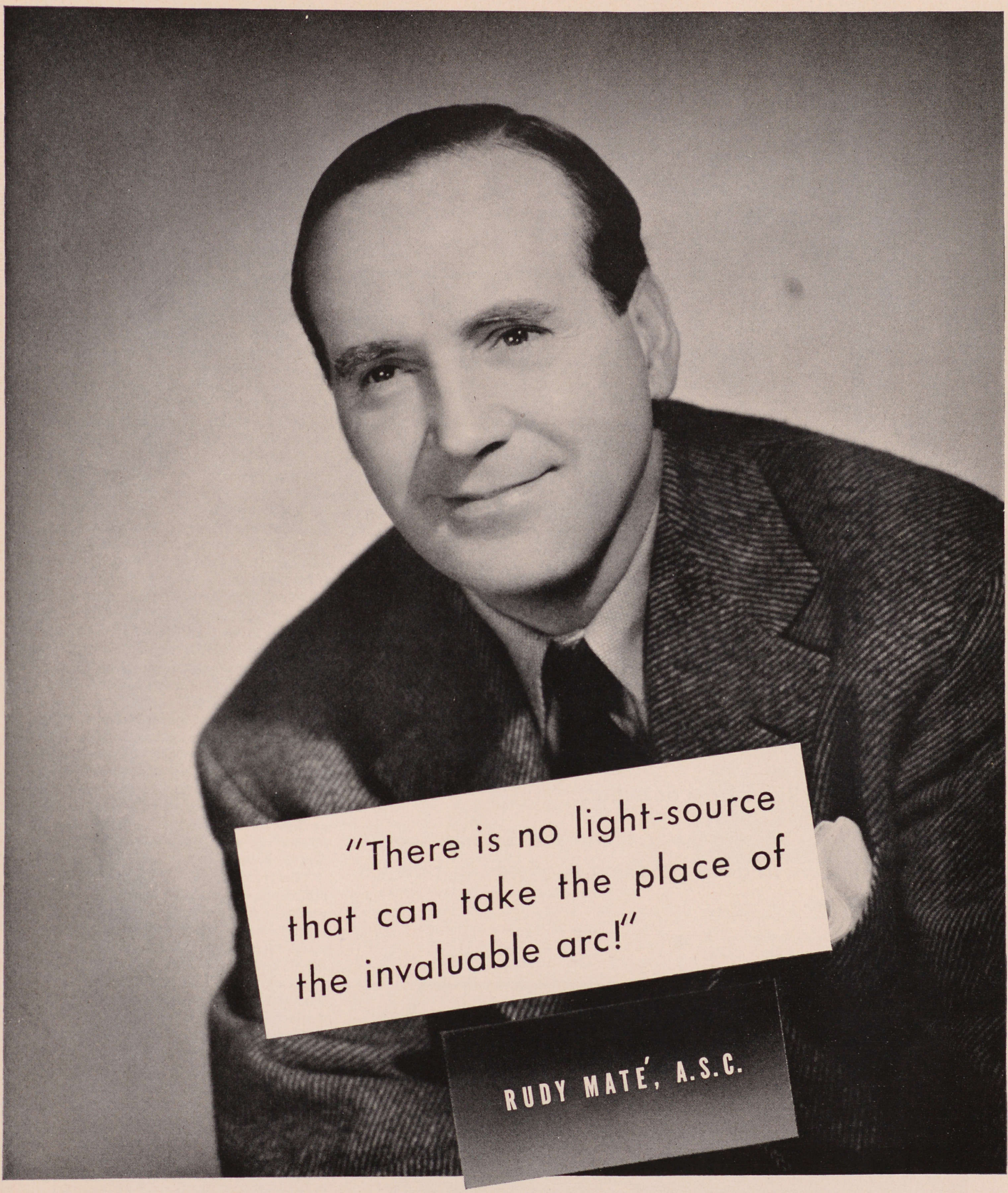
The forms are designed to eliminate the possibility of making errors in costuming, continuity, action, dialog, etc., which so frequently cause retakes even when a thoroughly experienced script-clerk is on the set. Naturally, they can also help the film-editor in putting the film into shape for release-printing.

By carefully planning the continuity of action, the camera-angles, transitions, and the like, a great deal of time, money and film can be saved. These savings can be notably enhanced if rough sketches of the scene can be added to the written data on the scene form. Even a simple plan view of the set or location, with doors, windows, furniture, etc., indicated, will aid in both the pre-production planning and the actual shooting. A plan like this, with the set sketched fairly closely to scale, and with the basic camera-angles and set-ups indicated, should if possible be included in the file or binder before each group of scene forms dealing with a given set or location.

If it is at all possible, a rough sketch of the content and composition of each scene should be included on each scene form. The director, the cinematographer, and in the case of technical training films, the technical or educational consultants, should collaborate in preparing these sketches which, naturally, do not need to be either detailed or artistically perfect, but merely enough to show approximately what will be on the screen in that particular scene, and the basic directions of movement.

Before an inch of film is exposed, these sketches and the accompanying data on the scene forms should show how the completed film will fit together, and how thoroughly it will tell its story. Thus gaps in continuity can more easily be detected and remedied.

When the film is actually in production, the sketches should save time in making camera set-ups, and should prob-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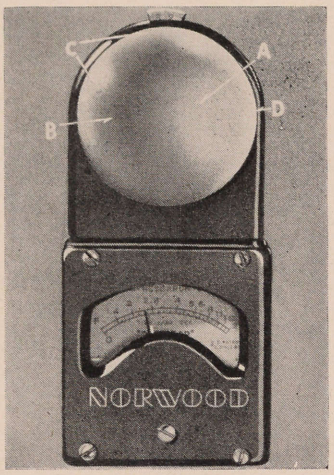
ably conserve film, as well, since they should eliminate the making of many unnecessary angles and protection-shots.

The sketches together with the scene form data as to action and angle, and the basic set-plan, should also make it easier to plan the camera-treatment of scenes made on location in accordance with the physical requirements of the location, and to plan the layout and dimensions of studio sets to suit the practical needs of the camera.

The use of set-plans and scene-sketches has already been advocated for both the professional and the amateur in many articles in this and other publications. It has, moreover, been proven in practice by a number of Hollywood's most successful studios and individual creative workers.

Its use in making today's essential technical training films should pay even greater dividends. So, too, should the use of the scene form system advocated by the writer. For while in making today's training films—civilian or military—the factor of profits and cost may be overlooked, we cannot overlook the fact that these films are needed urgently, quickly, and above all, in the most effective form possible if they are to play their full part in the all-out effort for Victory. And careful pre-production preparation is the first and most essential step toward putting them efficiently and effectively on the screen. END.



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Navy Films

(Continued from Page 513)

film, or a neglected tactical detail, will be more harmful than beneficial, for it may impart erroneous impressions to the thousands of recruits before whom it will eventually be shown. Students are taught to regard training films as a form of gospel, the learning from which may be a deciding factor on which their lives depend.

Thousands of recruits attending one showing of a training film will derive in a few minutes more benefit than they could receive from the full energies of hundreds of instructors over a period of weeks. Deck-space, time and equipment limit the number of lectures which can be given during a day aboard ship. For an instructor to impart his knowledge to a student, he must have a complete understanding of the subject being taught, be capable of instilling confidence and enthusiasm in the men, and he must know how to teach.

Different instructors are subject to varying viewpoints, and have divers methods of teaching a common technique. This tends to have a distracting effect upon the students in general when taught by this method, and when the groups are placed in an "employment status" at the completion of their training, a wide range of opinion will result.

The training film, as a universal guide, eliminates these differences, for the explanations are clear, well presented and, with few exceptions, require no further clarification. A staff of experts edit each film before it is released and every precaution is taken to avoid technical inaccuracies. A modern training film is a medium which is probably the closest to perfection for training purposes as can possibly be provided, and is an almost revolutionary advance over the primitive blackboard-chalk-instructor method. It renders obsolete the proverbial stand-by "that ain't the way I larned it."

The technique of teaching the operation of one of the ships' guns, for example, can be witnessed by thousands at one sitting, depending only on the capacity of the theater. It strips the weapon down to the base, explains each vital part, and in inverse order, by an unseen hand, reconstructs the weapon in correct technical sequence, carefully explaining each operating part.

Superimposed arrows put in by double exposure, clearly locate the portion being described, while an authoritative voice from the sound-track breaks the movements into detail, accentuating the value of each part to the operating efficiency of the gun as a whole.

Prior to the attack on Pearl Harbor, the U. S. Navy had realized the value of training films, and with uncanny foresight, unleashed a program of preparing hundreds of her men for eventual photographic assignments with ships of the Fleet. Through the altruistic and patriotic efforts of the March of Time Studios in New York City, enlisted men from the armed forces, including a large representation from the Navy and Marine Corps, participated in an intensive six months' course in movie-making. This course in modern Pictorial Journalism, under the direction of Louis de Rochemont, March of Time producer, prepares young recruits to record the far-flung encounters of this war, wherever the necessity arises.

Under the direct supervision of D. Y. Bradshaw, one of March of Time's most versatile editors, in cooperation with the organization's regular technical staff, the recruits are given intensive training not only in the use of motion picture technique, but also in the March of Time's inimitable technique of story presentation, enhanced by the practical knowledge obtained from field trips with regular crews, provide the students with a well-rounded knowledge of all phases of photography.

As the class is brought to a point where it can undertake missions in separate groups, experimental assignments are given on various subjects in and around New York. After completion of the field work, the material is brought through the cutting stage, the sound-tracks are dubbed in, and the narration written—all in the March of Time's regular laboratories and under the supervision of March of Time's technicians.

To defray the costs of living in somewhat of a "civilian status," the enlisted men are paid regular Navy subsistence allowances in addition to their regular pay. During field assignments, March of Time provides the difference between their expense allowance and that of regular crews. The cost of maintaining this elaborate set-up is sustained completely by the March of Time, which in return derives only the benefits of improved film releases by the service for public exhibition and use—and the satisfaction that they are contributing a potent weapon to the defense of our country.

Increased demands for skilled personnel to perform hundreds of photographic missions have limited the existing pool of camera crews. The services of each man are constantly at a premium, and even before the completion of each mission, another is waiting.

Time, too, is at a premium—tomorrow means a new mission, a new subject. Their work is never finished, for new problems arise daily, and their task is to record the events surrounding them—to remove the burn from mistakes, to magnify errors, correct them, and to do it rapidly. They must provide the novice entering the Navy with a path of experience which oftentimes was obtained with the lives of those who came before him.

To coordinate the expansion of the Navy's need for Training Films, a Photographic Board was actuated to investigate the existing facilities in the commercial field for producing these films. This method made available the experience of years of movie-making and eliminated the necessity of training new crews for this specific purpose. Time was the all-important and deciding factor in this arrangement, and this seems to be a sound method for solving it.

Contracts were approved and now highly efficient civilian motion picture plants with modern equipment, animation artists, and other technical experts are engaged in turning out training films in mass-production. One company has turned out five color films, complete with sound, on the very important subject of First Aid. These films have been turned out in the remarkably short period of 12 weeks. Others are striving to meet records such as this and in very short order will be doing their parts with equal rapidity.

Every important phase of Naval warfare will eventually be covered with celluloid instructors. These commercial companies are under contract with the Navy Department and have been assigned technical advisors to assist them in this work. The Navy Department has placed the supervision of this activity in the hands of the Photographic Section of the Bureau of Aeronautics.

Subjects of a restricted nature are made entirely by Naval personnel directly under the Bureau of Aeronautics Photographic Section. Lieutenant Thomas

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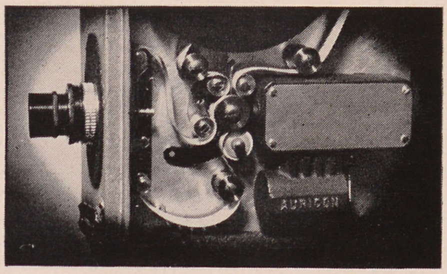

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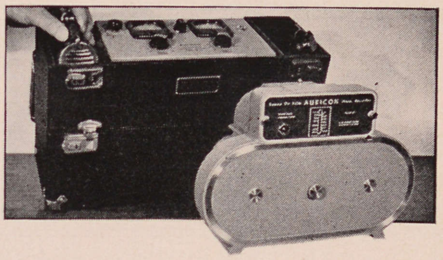

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Orchard of the March of Time, now serving with the Navy, is the officer in charge of the Training Film Unit of the Bureau of Aeronautics. Under Lt. Orchard three crews of enlisted men with a junior officer-director handle these specialized productions. As in the case of films made by commercial producers, a technical advisor in the particular field the film is to cover is assigned to render expert technical supervision.

Although the training film is never intended as a substitute for practical application, it is an important aid for instructional use as it creates in the mind of every man a vivid nucleus of what he may expect to encounter in actual operations—a priceless preview into the future. It standardizes instruction, and materially reduces the elements of time and suffering which practical experience so often exacts.

The leaders of a great industry, many of whom are now serving with the U. S. Navy, have been accepted by those in the service with a deep feeling of gratitude for the invaluable contributions they have made to the science of Naval warfare. The men of lens and shutter, called to the colors before and since the outbreak of hostilities, have demonstrated the value and importance of photography in all phases of Naval operations and have provided the skill and means to reduce the burden placed upon our shoulders by unsettled conditions in other parts of the world.

They have made possible a policy which will accelerate the production of training films during a time when they are most sorely needed, and have helped build an organization of experienced personnel to accomplish this work. They, with the tools of their profession, have acquitted themselves admirably in their services to their Country. This group of patriotic citizen-sailors have solidly cemented another milestone in the continued advancement of naval photography which will be carried on, even after the star of tranquility sees fit to reappear. END.

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Where Do I Go . . . ?

(Continued from Page 512)

skipper kept back one male calf in order that he and the crew might eat fresh beef on the day the Armistice was signed.

When I caught up with the ship the calf was a bloody great bull. But not an ordinary bull, for he had never seen a Greek field or a cow, and so we called him "Ferdinand the Sissy." He ate bully beef and ration biscuits, and for a lump of sugar would perform all sorts of antics.

At Haifa I boarded a train for Cairo and found myself sharing a carriage with a war correspondent who had just left Baghdad because "nothing ever happens here, old man" . . . During our journey news came through that we had invaded Iran. Was the war correspondent mad! The things he was going to do to Public Relations . . .

At Cairo I was ordered to Singapore by air, taking enough film with me to last a year. It only took me a week to get ready. Incidentally it was now that I caught up with my own equipment which had come round by way of the Cape to Cairo.

I examined it with reverence. A Model "E" Newman Sinclair with a lens of individual panels and all kinds of fine devices, also a turret Eyemo with a rangefinder and a patent device to slip gelly filters behind the lens in the body of the camera.

The night before I left I went into Tommy's Bar and met the New Zealand Army bunch of cameramen—MacIntyre and Elias, two of the nicest chaps in the business. If they ever come to Blighty I hope ACT will help them all they can.

Early next morning I left for Singapore by Imperial Airways flying-boat, touching down at Tiberias, whence I made a short rubberneck tour to Nazareth, which was completely spoilt for me by the horde of beggars and general commercialization. In every respect it compared very unfavorably with the Pyramids, where the guides have some kind of trade union and make it impossible for anybody else to rob you, except themselves, which of course they do very expertly—but one feels it's worth it.

From Tiberias our course was via Bahrein (the hottest place this side of Hell), Karachi, Calcutta, Rangoon and finally Singapore. At each of these places we stopped one night, and so to go halfway round the world took me six days. At Rangoon I visited the famous Shwe Dagon Pagoda—a wonderful Buddhist place of worship entirely covered with gold leaf plates. I noticed how nearly everybody, including the women, was smoking Burma cheroots. A few months later when I was a refugee passing through Calcutta I saw an enormous huddle of refugees, some of whom were also smoking treasured cheroots, and by this I knew they were from Burma. Only this time my paramount feeling was not that of memorizing a shot for some future film but of gladness that these poor people had eluded the Japs.

About Singapore and the battle of Malaya I find it very difficult to write anything at all. Anything from me would be foolish on the military angle, even if I were allowed to print it, which as an Army officer I am not—and from the civil end it seems very unkind to those who had relatives there. There are lots of things which I can't understand about Singapore. But whatever people said about the military, and especially about the civil side of the Malayan campaign, can only apply before the war started.

I saw with my own eyes how the Chinese population of Singapore dealt with fires in a manner which would have done credit to the A.F.S. How the much

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maligned whiskey-swilling planters acted as guides to the military, right under fire. How the police worked like devils to get rid of vast quantities of rice to the Malays and locals so that they could beat it into the jungle. How British Tommies worked as coolies in Singapore Docks unloading ships. And a thousand and one other fine things.

I remember a poor seventy-year-old Tamil laborer. In an air-raid he had one leg cut like mincemeat and was slowly dying, when another flight of Jap bombers came over. The dying man urged the one man of our party who spoke Tamil to run away as he too might get hurt.

On Christmas Day I got mixed up with a bomb and the blast dislocated my spine in two places. Whilst in the ambulance a wounded Japanese pilot was brought in—I was asked if I objected and was feeling too miserable to think of it. The ambulance chap gave me and the Jap a cigarette apiece from his own pocket. They straightened me out in a fortnight, for which I was very thankful. To me, spinal trouble brought visions of the Star and Garter.

Handling our stills negatives in Singapore was John Drake, whose photographic education commenced at Harrow (Kodak's, not the school). He is now in Ceylon handling the Public Relations stuff there.

The night the Japs landed on Singapore Island was made into a hell for them by our guns, which fired for sixteen hours. I'm told there was much more noise than on those famous first few nights in the London blitz when our barrage opened up. Once the Japs were established on the island things became pretty grim. Among the civilians were some astonishing examples of complacency and also of apparent indifference. Tuesday afternoon the Cable Office was put out of order by a bomb or shell, so it was decided that Public Relations, whose first duty is the safety of war correspondents and the despatch of their messages, should leave. I was sent also because of my cameras and because I hadn't been able to despatch anything for the last week owing to lack of transport.

So Tuesday night we boarded a very small naval patrol vessel and set sail. Our course took us right through the middle of a Japanese landing party in small boats—why they left us alone was a mystery. Shells were flying around us and parts of the island were burning. Once we sailed so close to a battery of enormous guns that each time they went off the blast was like a rock hitting us.

Each day thereafter we tied up alongside tiny islands, on the theory that Jap aircraft would believe us to be derelict, which is apparently what they did think. Everyone lay hidden and as still as a mouse. The planes would circle around us and then fly away.

We arrived in Batavia on the fifteenth—a Sunday—to learn that Singapore had fallen. After one night there we were ordered to Rangoon. So we embarked on a fine Dutch liner going west, with about a million other people, and departed in the midst of a tropical rainstorm down the Sundra Straits. But for this rainstorm we should probably have been torpedoed, as other ships were.

There were so many of us on this ship that we had to queue up for our meals and do our own washing up. To those of us in the army this was no hardship, but some people wouldn't eat simply because the meat and rice was put into their plate by the extremely dirty hands of a Malay cook. I saw the funny side of this and got lots of amusement watching these people who were accustomed to doing nothing at all washing dishes or sleeping on straw mattresses in the hold next to seasick Chinese. How they grumbled under their breath! To grumble out loud was to incur an extra turn of sweeping the decks.

In Ceylon we were told to disembark and await further orders. After about a month we were told that the War Office had seen fit to transfer us to the Indian Army. We were to go to Calcutta and await further orders. Sid Bonnet was with me from Singapore and he elected to come to Calcutta with me.

Our first night in Calcutta was spent in seeing a preview of some MOI shorts, and with them was showing *Wings Over Everest* which Sid Bonnet had shot. We were taken to live at the house of the local big shot, who used to work at B.I.P. Export and is now boss of a firm called British Distributors — name of George Reardon — and what with me being an old B.I. Per and Sid shooting this Everest film we were right in.

After three weeks of complete idleness and luxury I was ordered off to the Manipur Road in Assam to assist the war correspondents there. I found this very interesting work and Assam a very interesting place. After a month I was ordered to Delhi, where I was attached to His Royal Highness the Duke of Gloucester as official cinematographer in India. We fly all over India (literally) and I shoot so much film that Kodak's must think I'm a shareholder! At the time of writing I'm half-way through the tour and getting very fat through eating too much regal food—it's a miracle to me how Royalty keep any figure at all! END.

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DEVRY SINGLE SYSTEM SOUND RECORDING CAMERA, COMPLETE WITH 3 LENSES; VIEW FINDER; AMPLIFIER; NOISE REDUCTION; POWER SUPPLY; 3 WESTERN ELECTRIC MICROPHONES; FRICTION TRIPOD; 5 MAGAZINES; SUNSHADE MATTEBOX; CABLES; etc. $3,500.00 GAUMONT 35MM SOUND AND PICTURE PRINTER, $295.00. DUPLEX 35MM STEP PRINTER, $350.00. BERNDT AURICON 16MM RECORDING SYSTEM WITH NOISE REDUCTION. Like New, $595.00 S.O.S. CINEMA SUPPLY CORPORATION, NEW YORK.

WE BUY, SELL AND RENT PROFESSIONAL AND 16mm EQUIPMENT, NEW AND USED. We ARE DISTRIBUTORS FOR ALL LEADING MANUFACTURERS. RUBY CAMERA EXCHANGE, 729 Seventh Ave., New York City. Established since 1910.

ODD Lots; hard-to-get specials. 8-16-35mm Equipment, new, used. Stage, studio lights; professional tripods; lenses; 16mm sound projectors; 16mm auxiliary magazines; 16mm Berndt Maurer recorder; Speed-Graphics; binoculars. Trades Accepted; terms. Mogull's, 57 West 48th St., New York City.

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NEW FEARLESS interlock camera motor for N.C. Camera; W.E. interlock camera motor (door type); Western Electric interlock motor for Standard Mitchell Camera (door type); Mole-Richardson studio type microphone boom.
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NEW OR USED 16MM SOUND PRJOECTOR with synchronous motor, Ampro or Bell & Howell, furnish details. Julian Townsend, 136 Lincoln Blvd., Kenmore, N. Y.

An American Tradition

–HOME MOVIES ON CHRISTMAS NIGHT

SOMEBODY brings home a film or two, for the home movie camera. Like evergreens and turkey, it's part of the Christmas ritual . . .

For Christmas is a time for "family." For gathering, revisiting, marking the changes, thinking over Christmas a year ago, two years ago. In hundreds of thousands of American homes, this is the day of days when the Ciné-Kodak is very busy.

Later, in the evening, comes the time for living over other Christmases. On the home movie screen, each holiday unfolds: the new baby's first Christmas; the year when Christmas morning was bright with the beauty of falling snow; the Christmas when Jack came home after his first long absence; Alice's last Christmas at home before she was married . . .

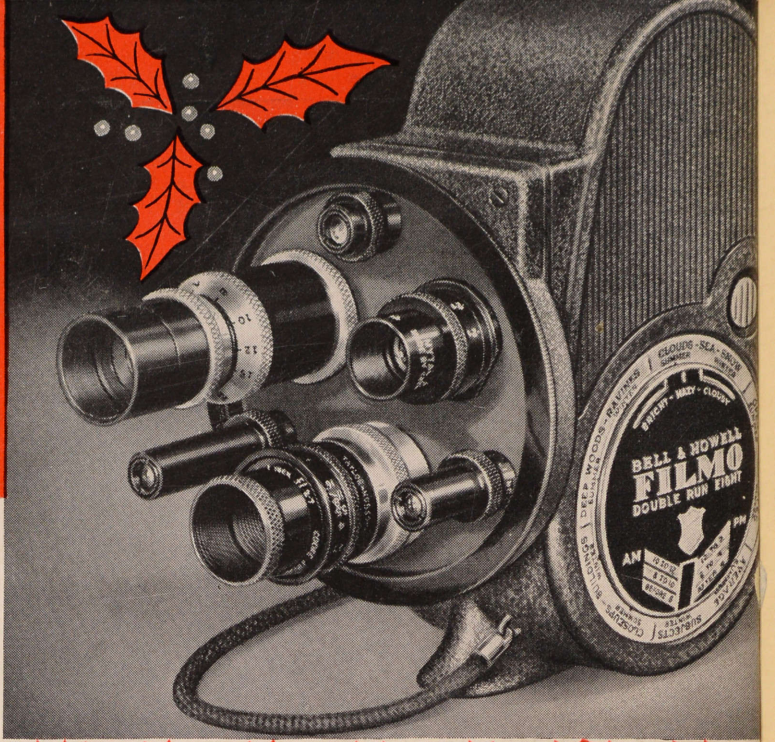
. . .

Year by year the record grows. This Christmas will add a priceless chapter—Christmas, 1942. Visit your Ciné-Kodak dealer . . . Eastman Kodak Co., Rochester, N. Y.

Life is a movie—**CINÉ-KODAK** *gets it all*

HERE'S HOLLYWOOD VERSATILITY AND 8MM. ECONOMY . . .

FILMO *Aristocrat* TURRET 8



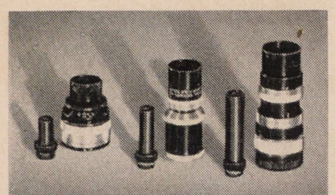
WHAT'S in a name? A lifetime of fine performance—when the name is Filmo Aristocrat Turret 8—the camera that brings Hollywood versatility to low-cost 8mm. movie making.

With the Aristocrat you are master of every situation . . . with three lenses mounted on the turret head, any one of which may be placed in photographing position simply by rotating the turret, you can make long shots, medium shots, and close-ups without moving from the spot.

Viewfinder objectives matching the lenses are also mounted on the turret. When a lens is in photographing position, so is its matching finder . . . *automatically!* You see exactly as much of the subject as will appear on the screen . . . and "what you see, you get." Speed range is 16, 32, 48, and 64 frames per second.

All of these advantages are *in addition* to the time-tested features of single-lens Filmo 8's . . . daylight loading, no sprockets to thread, no loops to form . . . enclosed positive finder . . . rotary disc shutter . . . single frame release for animation work. Price, with Taylor-Hobson 12½mm. F 2.5 UF lens and matching finder objective, not including critical focuser, $116.80.

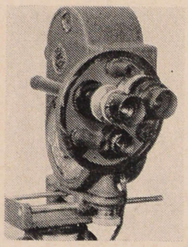
Only FILMO Accessories can match Filmo Camera quality



VIEWFINDER OBJECTIVES—for your Turret 8; a matching viewfinder objective should be used with each lens of different focal length. The objective is mounted beside the lens and will fill the viewfinder area with the field covered by that particular lens.

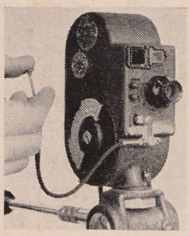
For 12½mm. lens (standard on Turret 8); for 1-inch, 1½-inch, and 2-inch lenses, $6.40 each.

TELEPHOTO LENS, for photographing faraway subjects—for single lens or Turret 8 Filmo; 1½-inch F 3.5 B&H focusing lens, $46. See your Filmo camera dealer for other B&H special purpose lenses, also.



FOCUSING ALIGNMENT GAUGE—for Filmo Turret 8 Camera; permits using the Filmo Turret 8 critical focuser to the full extent of its capabilities.

Title cards, maps—any subject, in fact, may be sharply focused and accurately composed within the film area and then photographed with complete assurance of desired results. Price, $8.80.



CABLE RELEASE—for absolute immobility—a necessity when doing critical work with a telephoto lens, or single-frame exposure work with any lens. Permits you to operate the starting button without touching the camera. Cable release for single-lens 8's, $3.45. For Turret 8's (including installation at factory), $3.75. For Auto Load and 141, $3.45; for Auto Master, $3.75.

CARRYING CASES for *all* Filmo Cameras; your Filmo Camera deserves a carrying case built for it—built to the same quality standards of the camera. To get the case best suited to your individual needs, consult your Filmo Camera dealer.

Prices range upward from $3.20.

Bell & Howell Company, Chicago; New York; Hollywood; Washington, D.C.; London
Established 1907

LET MOTION PICTURES BRIGHTEN THIS WARTIME CHRISTMAS...

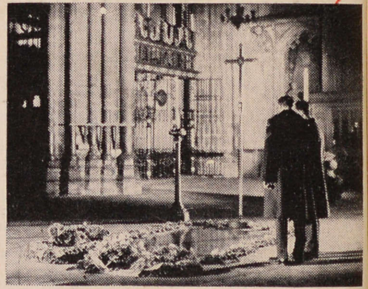
for you and your neighbors, too!

A world at war! Brave voices singing, "Peace on Earth, Good Will to Men"—in battle-scarred churches! In millions of homes, vacant chairs tell mutely of loved ones fighting to bring true the dream of peace and happiness to all mankind. But that is not the complete picture of this wartime Christmas . . .

Millions of homes and thousands of schools, churches, and clubs will rededicate themselves to the high ideals for which we fight. Fortunate, indeed, will be those who can enjoy the inspiration of fine motion pictures that fit the times and mood in which we carry on. There are morale-lifting films that tell of the war—and escape films which help one momentarily to think of other things. Yours is the choice.

YOU can be among those so favored, if you will but put your projector to work. For yourself and your own family there are fine films to be bought and rented. But here, also, is it not "more blessed to give than to receive"? Think of the happiness and inspiration you can give by using your projector for social service to your community!

Make this a movie Christmas—give films—the gift that brings joy to the whole family, and to many more besides



For the more serious note, official war films—like this British picture "Words for Battle," and many U. S. Government films—can be rented for as low as 25 cents per reel. (The first reel on any order carries a 50c charge.)

"E" for Excellence

A 10-minute sound motion picture available on nominal service charge.

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Please send full details about ( ) Filmo Aristocrat Turret 8 Camera; ( ) Catalog of available Accessories; ( ) Filmo 8's; ( ) Filmo 16mm. Cameras; ( ) Latest film releases by Government available on rental basis; ( ) Films for training and morale building.

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